Gleanings in Bee Culture

Established 1873

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The Monthly Honey Market

U. S. GOVERNMENT REPORT

Information from Producing Areas (last half of June).

South Carolina. The spring crop in the upper part of the State is good. Well-cared for colonies averaged 100 pounds of surplus. Sourwood is just starting to bloom in the mountains, and a good crop is in prospect. Demand for honey is reported very good.

Louisiana. Almost daily showers have caused scale colonies to barely maintain weight in Southern Louisiana, and in some cases they have lost weight. If the weather clears, small gains can be looked for since pepper-vines and vervain are in bloom. Corn is yielding considerable pollen. The soil is filled with moisture. Package bees and large numbers of queens have been shipped during this period. The rainy weather has reduced the percentage of matings. Though rain prevents bees from working on them, honey plants are in fine condition. Demand for honey is heavy, with few offerings, as many beekeepers have already sold their spring honey and some have delayed extracting because of the unfavorable weather. The honey is reported much lighter in color than usual. Sales reported in 10-lb. pails at 12½c per lb. In **Northern Louisiana** hot, dry weather has enabled bees to work sweetclover, which is not producing as much as normal. Alfalfa is now the main source, and some colonies have secured 90 pounds surplus already. Honey now being produced is not as light in color as earlier in the season. A good summer flow is in prospect. Market prices are irregular. Beeswax supplies are limited.

North Carolina. In eastern North Carolina the spring honey crop is now in the hives and averages the best in three years. In the Piedmont and mountain area, however, the spring crop has ranged from fair to short. Sourwood is now coming into bloom and prospects appear only fair for a flow from this source, but it is too early to forecast the possible size of the crop. Honey appears to be moving well, at prices ranging—extracted 60s 9c per lb.; barrels Light Amber Gallberry 8 1/3c per lb.; bulk comb, small pails and glass jars Light Amber Gallberry 10-15, few 3-lb. jars 17c per lb. 1-lb. jars $2.25-$2.40 per dozen; Light Amber Mixed Flowers 5-lb. pails 10c, glass jars 10 1/4c per lb.

Southeastern States:

Florida. Conditions vary widely in different parts of the State. Some beekeepers report a poor spring crop because of dry weather, with poor prospects for a summer flow; others have had at least three-quarters of a crop; in other areas recent rainfall has been so heavy as to lessen bee activities. The Tupelo crop is reported unusually light; the Gallberry crop is also very short; the Palmetto flow was perhaps 50 percent of a crop, but bees are now working on mangrove and other sources, with a heavy flow now on in many yards. Demand for honey is good with most beekeepers sold out. Sales reported Tupelo, barrels 14c, case lots or more 15c, small pails 19c per lb.; small pails Orange and Palmetto 10c per lb.; Amber Palmetto, barrels 8c, small pails and jars 13c per lb.; Mixed Flowers, barrels, 10c, case lots and less 11c, small pails 12-13c, 1-lb. glass jars 15c per lb. Bright yellow beeswax, 42c per lb., average yellow 40c per lb.

Alabama. Bees in most areas have done well and even colonies heavily shaken have stored a second broodnest of honey. In some localities colonies used for package production could have stored a super of Gallberry honey if supers had been available. Package and queen activities have been very heavy, though labor shortages caused some delay in shipping. Peppervine, snow-vine, sourwood, summer ti-ti, and white sweetclover are now blooming, and cotton is coming into bloom. Demand for queens has been good, but is now about over for the season. Requeening will start soon. Few sales reported barrels Dark extracted 6c per lb.; 10-lb. pails 10-16c per lb.

SUMMARY

The size of the 1942 crop of honey is becoming increasingly problematical. The problem would be solved in most areas if the bees could be assured of a period of warm, dry weather during the remainder of the time that major honey plants are in bloom. Nectar-bearing plants in general are in excellent condition and because of the abundance of rainfall they will continue in bloom longer than normal. But unless bees have weather suitable for gathering nectar the crop will be very much curtailed. So far abnormally wet, cool, cloudy weather has prevailed most of the time for many weeks in the Clover, Sweetclover and Intermountain Areas, and in fact west to the coast. The story of the season to date in the main honey areas has been one of unfavorable weather which has restricted bee activities and has resulted in the feeding of thousands of tons of sugar. Some feeding has been necessary even during the past two-week period in portions of the upper tier of States. Occasional beekeepers in Iowa, Nebraska, Indiana, Kentucky, and a few other States in the main honey territory, report good honey yields, already, and beekeepers in many southern States also have taken off good crops of honey. Yields in the South are extremely spotted however, and further crop prospects in that area are also widely variable. Crop possibilities in California are still mostly in the future, and in the Northwest any surplus so far taken off is principally restricted to occasional colonies. Wintered-over colonies are in much better shape generally than colonies from package bees, because of the late shipment of packages. Although continued wet, cool weather is causing heavy feeding of bees in Canada, beekeepers in that Dominion are looking forward to the largest crop on record.

Stocks of honey from the 1941 crop in beekeepers' hands have reached very low levels. Occasional beekeepers still have enough honey to take care of the calls from their customers, but most beekeepers are completely sold out. Demand from bakers is reported decreasing in many areas because of current price levels. Apparently many bakers are turning to mixtures of molasses, corn sirup and honey, or other less expensive substitutes for honey. Retail demand is reported excellent in most sections of the country. Prices of honey range widely in different sections of the country. Most packers, wholesalers and retailers were selling in March on an inventory rather than a replacement basis, and ha

not advanced their buying prices to the levels which beekeepers were securing during March, but some dealers had advanced their price levels enough to explain some of the wide ranges.

Parity Prices of Honey

"The Mid-Month Local Market Price Report as of June 15, 1942," issued by the Bureau of Agricultural Economics of the Department includes parity prices of honey for the first time. Using 1919-29 as a base period, the June 15, 1942 parity price of extracted honey is given as 10.4c per lb. and that of comb honey as 18½c per section. The parity price for beeswax on June 15, 1942 is listed as 29.6 per lb., compared with an actual average selling price on that date of 40.8c per lb. The minimum ceilings under the Emergency Price Control Act are shown in this report as 11.4c per pound for extracted, 20.4c per section for comb honey, and 38.6c per pound for beeswax.

Honey Imports Placed in Class III

Amendment to General Imports Order M-63 as amended June 2, 1942, as released June 30, 1942 by the War Production Board, includes both honey and beeswax in List III. The accompanying "official interpretation" of this order states that "no authorization is necessary for the release or withdrawal of materials on List III from a free port, a free zone, or the bonded custody of the United States Bureau of Customs (bonded warehouse) in the continental United States regardless of the date when such material entered such place. Also no authorization . . . is necessary for the subsequent disposition, processing, or shipment of such released or withdrawn List III materials."

Those desiring to import honey should apply to the War Production Board, Washington, D. C., for copies of form DP-222C, which must be submitted in duplicate. The envelope can be marked "Re. Order H-63." Even in cases where import orders have been placed and confirmed earlier special import authorizations are now required if the orders have not yet been shipped.

Monthly Report of Honey Producers

Early in July we sent the following questions to honey producers: 1. At what price has honey been sold or contracted for, if any, in large lots (carload lots or less) in your locality during the past month for (a) extracted honey, per pound? (b) comb honey, Fancy and No. 1, per case? 2. What are prices when sold to grocers in case lots of (a) extracted honey in 5 lb. pails or other packages in terms of 5 lb. pails? (b) comb honey, Fancy and No. 1, per case? 3. What is the retail price to consumers in your locality of (a) extracted honey in 5 lb. pails, or other retail packages in terms of 5 lb. pails? (b) comb honey, Fancy and No. 1, per section? 4. How is honey now moving on the market in your locality? Give answer in one word, as slow, fair, or rapid. 5. How does the number of colonies that are in condition to store surplus honey this season compare with the number of such colonies last year? Give answer in per cent. 6. What is the condition of the honey plants at this time in your locality as compared with the average? Give answer in per cent. 7. What is the per cent of winter and spring loss of colonies (if any) in your locality? Give answer in per cent. 8. What is the present condition of the colonies in your locality as compared with normal? Give answer in per cent. The answers returned are tabulated as follows:

Date Rec. July	State	Name	Large Lots Ex	Large Lots Comb	To Grocers Ex	To Grocers Comb	To consumers Ex	To consumers Comb	Movement	No. of colo.	Con. of plants	Pct. of loss	Con. of colo.
8	S-Ala.	(J. C. Dickman)			.45		.60	.25	Fair	80	80		80
13	B. C.	(A. W. Finlay)	.12½		.75		1.00		Fair	75	110	35	95
13	S-Calif.	(L. L. Andrews)	.11				.85	.25	Rapid	100	30	10	75
13	C-Calif.	(Davis Bros.)	.10				.75		Fair	100	100		100
13	SE-Colo.	(Otis E. Adcock)					.80				75	10	75
7	E-Conn.	(Allen Latham			.80	5.00	1.05	.30	Fair	100	100	5	100
11	S-Fla.	(C. C. Cook)	.08		.60		.80		Rapid	90	100	10	100
13	C-Fla.	(Harry Hewitt)			.68		.80		Fair	100	100	2	100
10	SE-Ga.	J. J. Wilder	.07½		.65	.70*	.75	.80*	Fair	100	100	10	100
10	NC-Ills.	(A. L. Kildow)					.50	.17	Slow	100	125	5	100
7	S-Ills.	(Carl E. Killion)	.11						Rapid	125	100	3	100
8	NC-Ind.	(T. C. Johnson)			.60	3.00	.75	.20	Rapid	100	60	5	100
7	NW-Ind.	(E. S. Miller)			.75	3.60	.85	.20	Fair	100	100	10	90
11	W-Iowa	(E. G. Brown)			.67		.85		Rapid	110	110		100
9	N-Me.	(O. B. Griffin)				4.90		.28	Slow	60	100	60	90
8	C-Md.	(S. G. Crocker)			.68	3.00	.78		Fair	40	50	20	50
18	N-Mich.	(Ira D. Bartlett)			.75		.88		Rapid	100	110		100
9	S-Mich.	(F. Markham)	.12		.75		1.00		Rapid	100	80	5	90
9	C-Mich.	(E. D. Townsend)	.13						Fair	90	100		
9	SW-Minn.	(L. A. Syverud					.91		Slow	70	100	10	75
11	W.-Minn.	(B. Morehouse)	.12¼		.83		1.00		Fair	75	85	7	85
10	W-Nev.	(Geo. G. Schweis			.60		.75	.20	Fair	100	75	25	100
	W-N. M.	(C. A. Baltzley	.12		.52		.73	.24	Rapid	100	100	10	100
1	NW-N. Y.	(Geo. B. Howe			.70		.88		Fair	95	100	10	95
7	C-N. Y.	(F. W. Lesser	.12						Fair	120	100	3	100
6	C-Ohio	(R. D. Hiatt)			.85	4.80	1.15	.27	Rapid	100	110	5	100
16	NC-Okla.	(C. F. Stiles)			.65		1.00		Fair	100	90	10	85
8	C-Pa.	(Harry Beaver)			.70		.80		Rapid	100	40	5	120
7	SE-Pa.	(D. C. Gilham)			.80	4.25	1.10	.25	Fair	140	90	4	100
16	W-S. C.	(E. S. Prevost)			.75		.90		Rapid	100	100		25
10	SE-S. D.	(J. F Norgren)			.70		.89		Fair	100	110	15	100
8	C-Tenn.	(J. M. Buchanan)					.75	.25	Fair	100	75		90
11	E-Tenn.	(W. L. Walling)					1.00		Fair	100	50		75
9	S-Tex.	(J. W. Mayes)	.08						Rapid	60	75	15	75
9	S-Texas	(H. B. Parks			.45		.58		Fair	100	90	2	100
18	W-Vt.	(Phillip Crane)			.90	4.25	1.25	.30	Rapid	100	100	5	100
7	N-W. Va.	(W. C. Griffith					.55	.20	Fair	100	75	1	100

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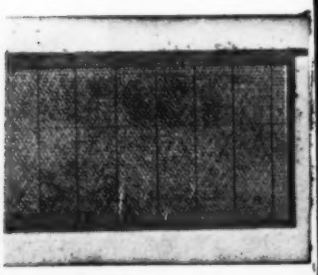

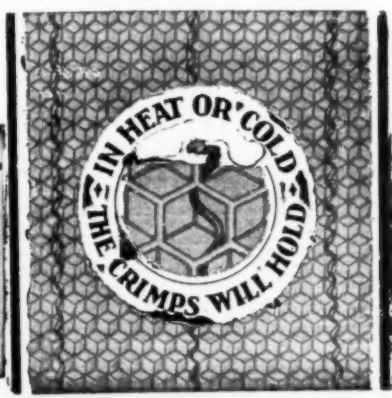

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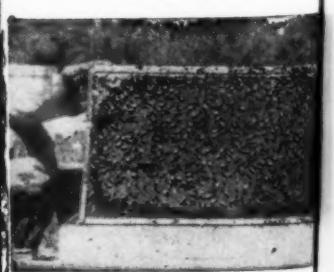

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Gleanings in Bee Culture

August
1942

Plan Now for Next Year's Crop

Some Factors Essential for Success

By H. J. Rahmlow

In the Northern honey producing states, one of the critical periods in beekeeping is between fruit and dandelion bloom and the beginning of the white and alsike clover bloom. During this time of heavy brood-rearing, bees usually consume more honey and pollen than they bring in. If, then, we have a period of rainy or cloudy weather during fruit and dandelion bloom so that the bees can obtain but little nectar, there may be danger of starvation before clover starts to bloom.

That was the case this spring of 1942. Some beekeepers had reserved frames of honey for feeding, and had allowed sufficient stores to carry the colonies over, with a resulting saving of labor cost and other expenses.

With a shortage of labor and the uncertainty of getting sugar, as well as transportation equipment, it is going to be very important that we leave enough honey in the hives this fall to carry the bees over until the beginning of the main honey flow. Plans for that should begin now.

How Much Honey Is Needed for Winter

Dr. C. L. Farrar of the Central States Bee Laboratory reports that colonies of average strength in Wisconsin and Wyoming, according to records, use from 50 to 55 lbs. of honey from the end of the honey flow in the fall to the beginning of the honey flow next spring. Very strong colonies use from 60 to 70 lbs. Dr. Farrar is also convinced that we get **more profit from the honey we convert into young bees** than from any honey we sell.

It takes lots of bees to produce a good crop of honey and it takes lots of honey and pollen to produce a good crop of bees.

During the present emergency there may be a tendency to reduce the size of the brood nest in order to force honey into the supers for extracting. To do that would be like taking money out of the bank and not saving anything for a rainy day.

Government reports indicate that the **average production** in most states is very low. Good beekeepers can produce three or four times as much as the average. It can be done by adopting a system of management that will produce large colonies ready to carry in the crop when the flowers are in bloom.

Three Hive Body Brood Chamber

During the past few years the writer has adopted, following the example of the Central States Bee Laboratory, a three-hive-body brood chamber with excellent results. We were pleased to find that during August and September more than 50% of our queens were superseded and we have the finest lot of young queens this spring we have ever had. In fact, in some yards the supersedure was as high as 99%. These young queens are very vigorous. As soon as they have a large enough population they will lay in two and even three of the brood chambers in the spring and if room is given at the right time and place, are much less apt to swarm than older queens. This results in less labor in management.

The reason for this supersedure of normal but worn-out queens is that under a system of supplying plenty of room for brood-rearing, queens wear out rapidly and are replaced normally by the bees. Given plenty of room in August and September, the colonies do not swarm while they are superseding, so we

Use of a three hive body brood chamber, with good queens and plenty of stores, results in strong colonies in midwinter. Photographed on January 31.

make no effort to control swarming at that time and have had no swarming. We must, of course, recognize the difference between supersedure of abnormal queens such as those of poor stock, or infected with nosema, and normal but worn-out queens.

The use of three hive bodies for brood-rearing enables us to reserve 70 or more pounds of stores for winter feed and early brood-rearing.

Good Wintering

We are convinced from years of testing it, that heavy winter losses are due to improper conditions within the hive. A system of management which produced large colonies of young bees for winter with plenty of honey and pollen for feed enabled us to winter with no losses, without packing the colonies.

Prepare Now for Next Year's Crop

One of the important factors in assuring successful wintering is to enable the bees to carry on maximum brood-rearing during August and September. There is a mistaken impression among some beekeepers that we do not want heavy brood-rearing during the fall months. They think that old bees simply use up a lot of honey. Heavy brood-rearing during August and September will provide young bees for October when brood-rearing usually stops so that the colony goes into winter in good condition.

One of the reasons why so many beekeepers do not have strong colonies in the fall is that during a slow honey flow so much honey is stored in the brood nest that often the queen has very little room for egg laying. This means a small number of bees in the fall. **We cannot have strong colonies in the spring from weak colonies in the fall.**

Top or Bottom Supering

One of the troubles with top-supering is that in case of a slow, late honey flow, a barrier of honey between the brood nest and the empty supers above will cause the bees to store honey in the brood nest. This will limit the area available for egg-laying, resulting in weak colonies by fall.

During a short and heavy honey flow the bees will carry the honey up into the empty supers on top of the stack quite satisfactorily. In some sections of the country where this type of honey flows prevails, top-supering can be successfully used. In other sections, however, the beekeeper must use good judgment and see to it that there is plenty of room for egg-laying during late summer and fall.

The Fall Honey Flow

Because of the uncertainty of getting sugar it will be wise this summer not to depend upon a fall flow for winter feed. We shall leave on the hives upward of 100 lbs. of honey until we are sure there is a fall flow. Then we won't need to worry next winter and spring.

Madison, Wisconsin.

[We have found during the past decade that approximately 85% of our colonies in double brood chambers, especially those in Western Ohio located in the sweet clover and alfalfa region, supersede their queens during August and September. These young queens are surely vigorous. They should be, reared as they are under ideal conditions. The few queens that fail in the spring and are likely to be superseded before the major honey flow starts are replaced with young queens when colonies are checked during April and May. As stated editorially, page 417, July, 1942, Gleanings, queens in large double brood chambers are likely to wear out quicker than queens in smaller brood chambers.

We also practice running colonies in three-story hives during August and September. This gives ample comb space for brood-rearing, storage of pollen and incoming nectar, also honey reserved for winter and spring stores. We have also tried three-story wintering and it works well. If populous colonies do not need three hive bodies during the winter months they will need them quite early in the season when fruit bloom starts. So why haul the supers from the apiary to the honey house late in the fall, then haul them back again in the spring? Because some of us have thought, or perhaps still think, it has to be done. It doesn't,—at least, not in this locality. It may seem necessary in some localities farther north.

Mr. Rahmlow has given us some food for thought. Why not try out three-story wintering with a superabundance of stores on a few colonies at least and see what happens next season?—Ed.]

With Bees in Kentucky

By Jessie H. Anderson

[Note: This article was written during the late fall of 1940.—Ed.]

A hillside dotted with white hives, bees beginning to dart in and out in a business-like way, warning us they were going to need more room soon, and our parents, convalescing from influenza, and who had permitted no one but themselves to care for the bees — such was the situation confronting my sister and me last season when the honey flow started.

Reluctant though we were we felt we must do what we had never done before—go into a hive of lively bees, take out honey, and put in fresh frames of foundation. In the library of our home we found many back copies of a bee magazine; also a wonderful encyclopedia on bees which had been our parents' guide through many years.

We ordered supplies. The new veils, smokers, and gloves gave us courage. Still we approached those lively hives with more trepidation than we ever had in any situation in our backgrounds of schoolroom and office. We chose a cool morning at daybreak and selected a hive on the end of a row. The disposition of the inmates proved to be mild and with little trouble and no stings we took out the ten frames heavy with honey and re-filled the super with new foundation. Morning after morning we repeated the adventure, though not always did we come out free from stings. Some colonies were easy to handle; others were fierce little fighters and came out with a rush at us each time we approached them.

It had been twelve years or longer since our parents had re-queened the colonies with good stock, yet the effect of that new blood was there, showing throughout the apiary. We learned the hives that had occupants long in body and dull gold in color, and breathed easily when our work was with them, for we could depend upon their even disposition. We knew and dreaded the hives where the smaller bees showed their hybrid blood and darted at us all humped up ready to sting.

The bees were finding an abundant supply of nectar, so much that frames were filled faster than we could take care of them. Ten o'clock at night often found us scraping frames and refilling with foundation in preparation for our work at dawn.

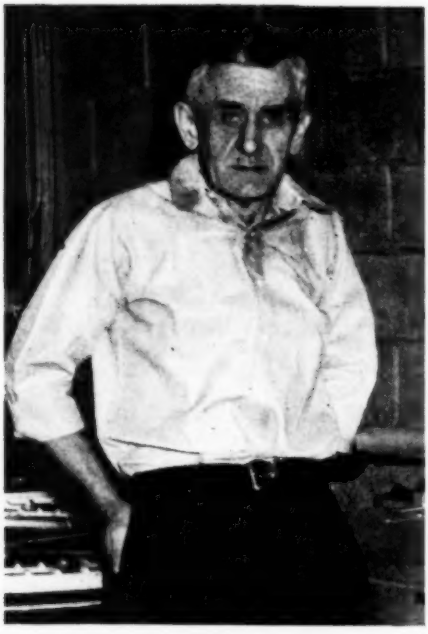
Comb honey, the nectar from wild flowers, is our specialty. While we do have some clover fields, back from them are the wooded hills, acres and acres of hardwood, softwood, shrub and wild flower. And it is from these sources they gather most of their nectar, visiting willow, poplar, maple, sourwood, and many others, with impartiality. Naturally, the tints and flavors run through a wide range, from delicate pastels to dark honey-gold; pale, with the faint aroma of the wild flowers; dark gleaming brown, with the rich tang of unknown trees of the woods. We enjoy this variety and so do our customers.

Marketing took us into new fields, caused us to develop new skills. Among our customers are the faithful few in a city several hundred miles away, old customers of our parents. They like the wild flower honey and call it "that genuine, real honey." We send it to them in pails, ten pounds in each, by express. We sell to neighbors, to villagers, and business acquaintances in towns where we go in connection with our farm business. An assortment of pails in different sizes is kept ready to put into our automobile when we are making a business trip. The dollar pail, the one-seventy-five, and the two-fifty, are the three we prefer to push.

Use Honey Instead of Money, is Our Slogan

We thought of it first when the circus came to town and a visiting nine-year-old cousin gave us an excuse to see it all. Circus people must eat. Why not use honey instead of money for our admission? The plan worked beautifully and, encouraged, we tried it with success on our local insurance agent, the beauty-parlor manager, the laundress, the refrigerator service man, and others, leading up to barter on a big scale when the coal man came along. For a truckload of coal he took one-third of his pay in honey, hauled it away and sold it in turn to persons of his home town in the coal region of our State. Again he came to repeat the deal, and yet again, until we had approximately

(Continued on page 507)



L. H. Benninghof, Columbus, Ohio, the city beekeeper who turned professional.

A City Beekeeper Who Turned Professional

By H. H. Root

"The first year that I produced 10,000 pounds of honey I thought I had become a big beekeeper at last." So spoke L. H. Benninghof, of Columbus, Ohio, one of the leading beekeepers of the Buckeye State. We were having lunch and our friend was in a retrospective mood. "My first crop of extracted honey amounted to ten cans. My ambition was to produce 10,000 lbs. and when I did this I kept on increasing until today I have bee yards 75 miles from home—the closest 22 miles." He was silent a few moments and then added, "I'll never retire. I couldn't, even if I would. No, I'll always be a beekeeper."

All through the years, Mr. Benninghof, at first a part-time beekeeper, has planned his work with the idea of saving labor. Too young to have had experience with horses about a bee yard, the motor truck has always played an important part in his planning. During these days of rubber shortage and gasoline rationing, the Dodge trucks (very different looking from the old Ford with a pick-up body with which he started) must be conserved, hence every trip must count and all unnecessary mileage be eliminated.

The spacious, concrete honey house all on one floor, is complete and well appointed. It is so arranged that the truck may be driven right in, the overhead rolling door fitting tightly enough to keep out the bees. There are concrete floors throughout; there is a toilet, a washroom, and even a shower bath. A gas-fired boiler provides all the necessary steam for the great variety of work done, and plenty of radiation in the extracting room permits a 90 degree F. temperature even though it is below freezing outside.

There are rooms of ample size for the storage of 60-lb. cans, and others for the storage of thousands of supers of drawn combs. These rooms are tight enough to permit fumigating with Cyanogas to keep out any wax moths, and large enough to hold plenty of supers. Mr. Benninghof likes to have enough supers on hand to take care of both lean and good years—each super filled with drawn comb of the non-sag variety.

When plenty of steam is available, it is surprising how a modest installation can be made to save labor. The two 45-frame radial extractors are each supplied with a radiator under the bottom, made of copper tubing and heated by exhaust steam from the power uncapping knives, or by live steam when necessary. The honey thus runs more freely by gravity to the pump and less honey is left in the bottom of the extractors. When the steam is turned off the uncapping machines, it automatically stops cir-

culating through the copper pipes under the extractors so there is no danger of overheating.

Some parts of the equipment are more easily heated with hot air rather than by steam. Under the tall honey storage tanks are gas burners. The flame does not come in contact with the tank,—the gas being used merely to warm the air under the tanks. In cool weather, especially, this greatly facilitates the quick settling of the honey.

A metal hot room holds 20 60-lb. cans for liquefying. The hot-air method is used, a gas burner heating the air. An electric fan keeps the air in motion and in circulation throughout the whole compartment.

The extracting equipment throughout is all piped to the pump so there are no cans around on the floor to be emptied. Adjoining the two uncapping machines is a rack for uncapped combs before they go into the extractor. This rack is also provided with a drain pipe leading to the pump. The capping dryer, not shown in the picture, is also to have a drain to convey the honey to the pump. The exhaust steam is carried out of the building and no water is allowed to escape on to the floor or into the atmosphere. The room is thus kept as dry as possible to avoid danger of honey taking on moisture.

The speed of the pump is kept low, at a point where it will just handle the maximum amount of honey extracted in a day.

A large motor, standing on the floor near a corner, is connected with a counter shaft on the wall back of the extractors by a V belt,—each extractor being driven from the counter shaft also by a V belt. The horizontal shafts run all the time,—each extractor being handled independently by means of the friction drive. Each one is also handled at whatever speed is exactly right for the combs in question.

The uncapping machines are also driven by V belts from a separate motor.

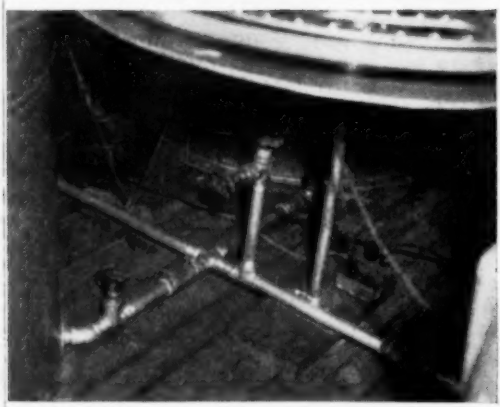
Mr. Benninghof confines himself strictly to a wholesale business. He does not pack in jars or small cans but in 60-lb. cans only, which are filled by means of a quick acting gate-valve. Frequently a buyer backs his truck right into the honey house where it is loaded. Such transactions therefore are not f.o.b. but a.h.h. (at the honey house). Then there is no freight to pay,—not even hauling charges to the railroad station. He wholesales his own crop and also buys from beekeepers all over Ohio, Michigan, and Indiana, under the name of Clover Blossom Honey Co.

Mr. Benninghof is an advocate of double 10-frame brood chambers the year around, with wood-wire excluders under the supers. Looking down into some of the last supers put on (top-supering, by the way) and observing that the honey was sealed almost half way down the combs I suggested that extracting could soon be

Benninghof's honey house. Room for truck in the front center. Extracting room at left. Workshop at right front. Washroom at right middle. Storage rooms for supers and cans at the back.

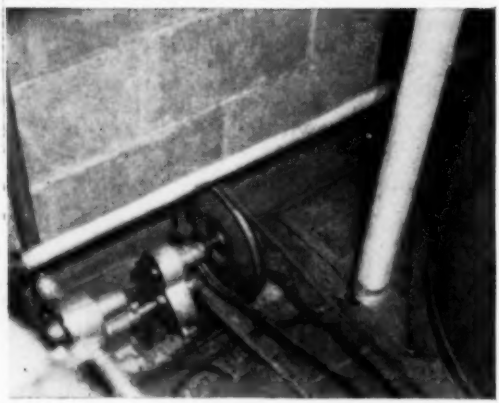
started for the combs in the supers first put on must be at least three-fourths sealed. "Well, I am in no

Interior of extracting room. Equipment consists of two 45-comb radials, two uncapping machines, stand for uncapped combs. A centrifugal extractor for cappings is to be added. All connected with a back-geared honey pump. Each extractor is warmed with a steam coil underneath.



hurry," Mr. Benninghof replied, "I want wax this year, and a lot of it. I'll be better satisfied if the combs are capped solid to the bottom bar. My honey will be all the better. You will never find any of my honey thin, and when I get through my season's extracting I'll have a lot of good wax too." Right he was,—and is. There

Each piece of equipment is piped to the honey pump at the back. Each extractor outlet is provided with a shut-off valve so it may be cut off if not in use.



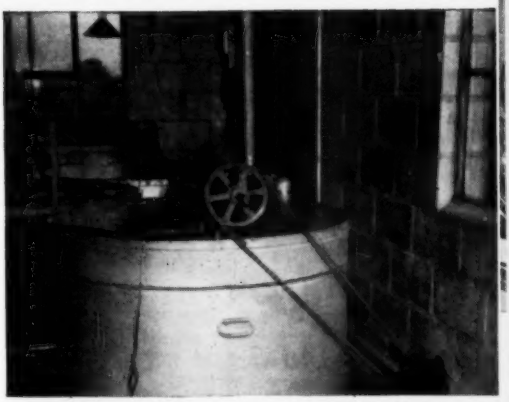
is not enough beeswax and too much thin honey,—too much talk of heating to prevent fermentation. All directions for the duration should be revised. Don't extract until the combs are sealed clear to the bottom bar!

A back-geared honey pump elevates the honey from five pieces of equipment to the storage tanks. By means of the gearing pump it is slowed down so that it is easily driven by a V-belt.

Mr. Benninghof is a firm believer in Caucasian bees. "Better workers. Cap their honey whiter, and you do not have to waste all your time puffing smoke. Got to handle 'em different from Italians, though. And you need a good strong hive tool." This last he added with a significant wink.

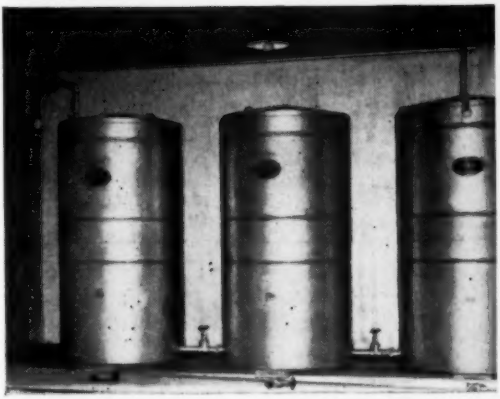
A motor on the floor close to the wall is V-belted to counter shaft on back wall.

Not only does our friend prefer Caucasians but he prefers to rear his own queens. He grafts larvae from his choicest stock and puts the prepared cell-bars into strong cell-build-



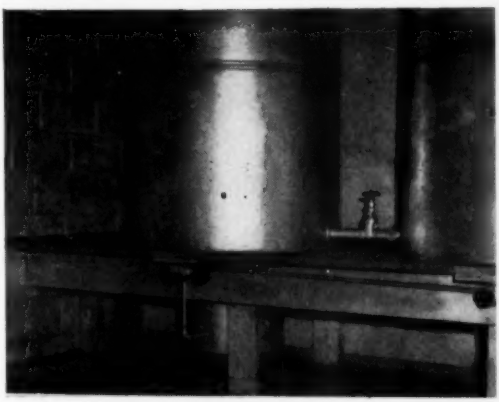
Each 45-comb radial extractor is driven by light V-belt from counter shaft on wall. Each extractor is, therefore, independent of the other and each may be driven at the proper speed for the combs it contains.

ing colonies. His mating nuclei are made up of two standard combs on each side of a 10-comb hive, separated by division boards from a five-comb nucleus in the center. Each outside nucleus has a separate entrance on the side of the hive. Later on it is simple to unite the three into one hive by pulling out the division boards.



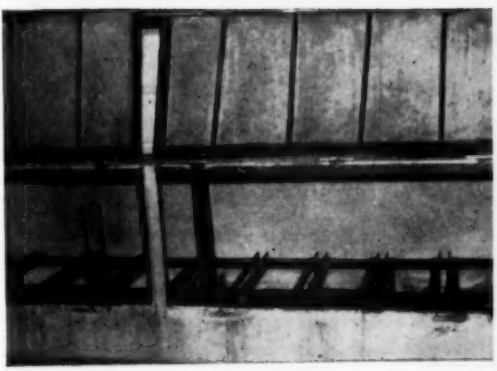
The pump delivers the honey to the tank at the left. When full the valve between tank 1 and 2 is opened so that the second tank can fill from the bottom of the first. Third tank filled from the second in the same way.

Beekeepers have gone through hard times in the last few years when honey prices were so low and when the demand, even in spite of the best efforts of the American Honey Institute, was not all it should be. Today, with the demand good, when prices once more are higher, the picture has changed. Now, if the supers of newly capped honey are tiering up,



A gas burner under storage tank No. 1 keeps the contents warm to facilitate settling and clarifing.

and if the bees are darting back and forth with that sweet, continuous humming, no wonder man can average the bad years and the good and say, "I'll always be a beekeeper."



Metal liquefying compartment holds 20 60-lb. cans. A gas burner at the right heats the air which is kept in constant circulation by an electric fan. Cans stand upright

Removal of Moisture from Honey in the Comb

By W. A. Stephen
Dominion Experimental Farm, Ottawa, Can.

[Taken from the August, 1941, issue of "Western Canada Beekeeper."—Ed.]

At one time it was the practice in Canada to extract honey before the combs were capped. The honey was ripened in shallow tanks holding about 375 pounds. This practice was also followed in the United States by the well-known beekeeper, E. W. Alexander, and Isaac Hopkins, apiarist for New Zealand, advised it.

During later years the practice has fallen into disfavour, beekeepers preferring to leave the honey on the hives until it is at least two-thirds capped. Even taking the precautions involved in this method some beekeepers have found it difficult to obtain first grade honey, and a great deal of the honey going onto the market contains a high percentage of moisture.

Of course, the objection to honey of high moisture content is that it may ferment in storage, whereas honey of lower moisture content, particularly honey of first grade, is not so apt to do so.

New Zealand has had a high standard for many years. They do not consider a honey containing more than 17.6 per cent moisture as free from the possibility of fermentation and they will not permit it to be exported. While, in some years, it may be difficult for Canadian beekeepers to produce honey of such quality, the average moisture content of over 1,000 samples of honey representing all producing areas in Canada for six crops was 16.92 per cent, varying from 12.7 to 21.0 per cent.

Moisture removal by hive ventilation has been shown by Reinhardt at Ames, Iowa, to be possible to a certain extent, but it is not possible in damp weather. In fact, excess ventilation may result in the honey absorbing more moisture. It is under such conditions of humidity that the beekeeper needs some special means for the removal of moisture.

In 1939 Prefontaine in Manitoba patented a "dehydration unit," but no report on its use has come to the writer's attention. It consists of an inverted cone above a vertical cylindrical screen through which hot air is passed. As the honey runs down the sides the hot air passes out through the honey, supposedly removing some of the moisture it contains.

Some other methods have been tried such as forcing heated air against the honey flowing down an inclined plane, but results have not warranted the continued use of these methods.

In order to test the feasibility of removing moisture from honey in the comb several experiments have been conducted at the Bee Division, Central Experimental Farm, Ottawa, this past year. The basis for these experiments lay in the reasoning that if it were possible to remove the moisture from the thin honey before extracting that it would be much easier than waiting until after it was extracted when it would be mixed with the thicker honey.

Several different methods of drying honey in the comb have been tried at the Bee Division, including heated air rising through the supers, heated air blown through by an ordinary electric fan, unheated air forced through by a large blower fan, and finally heated air forced through by the blower fan.

Only the results of the last method are being presented here, as results of the former trials only emphasized the necessity for heat and forced air.

Seven standard Langstroth supers of honey of various weights and varying amounts of cappings, as may be seen from Table I were set above an enclosed steam radiator. The steam radiator was turned to a horizontal position and enclosed in a box. A hole the size of a super was cut in the top and another hole cut in the end, through which air was forced by a multivane fan driven by an electric motor. The air passed through the air spaces of the radiator and up through the supers set above the box. An empty super at the bottom of the pile had a glass door through which one could see the thermometer and the hygrometer which were placed inside. A thermometer lying on the combs of the top super registered the temperature of the outgoing air. The

TABLE 1—Loss in weight of honey in combs set above steam heated radiator during two consecutive six hour periods

Super No.	Super Weight Lbs.	Area of Honey %	Area of Cappings	Loss in Weight Six-hour Period First oz./32	First %	Second oz/32	Second %	Twelve-hour Period TOTAL oz./32	TOTAL %
256	74	95	4/5	194	0.59	90	0.27	283	0.87
335	68	80	1/2	103	0.41	61	0.24	164	0.65
309	62	90	3/4	90	0.32	53	0.19	143	0.52
229	61	90	2/3	124	0.46	99	0.39	223	0.85
314	40	65	1/2	142	0.94	86	0.57	228	1.52
338	35	75	1/4	54	0.47	34	0.30	88	0.77
334	32	50	1/8	123	1.27	74	0.76	197	2.03
Totals				830	0.56	497	0.34	1327	0.90

rate of flow of air passing between the combs was measured by means of an anemometer.

Each comb was carefully weighed before being placed in the super again after six hours' running and again after twelve hours, at the close of the heating period.

By means of the refractometer the actual amount of moisture in both capped and uncapped honey was determined before and after the heating period.

Results

Experiments not described here show that evaporation took place from the uncapped thin honey at a faster rate than from the uncapped riper honey; also that moisture was removed from capped honey, the wooden frames and the super itself. There was indication that air forced downward through the super would give better results than air from the bottom, but the latter method is the more practical.

Table I gives the details regarding weight, amount of honey in the combs and amount of cappings. The losses in weight are expressed in thirty seconds of an ounce (oz./32). The corresponding percentage appears beside each loss in weight.

Almost twice as much moisture was evaporated from the honey during the first six hours as during the second six-hour period. While the total percentage, 0.9, may not seem to be great, it should be kept in mind that this is a sufficient amount to raise honey from third to first grade, that would be third grade to 17.8 which would be first grade. The loss is based on heavy combs fully capped which lost little moisture, as well as on the lighter uncapped combs which lost a great deal. One of these lighter combs containing honey of high moisture content lost 7.3 per cent of moisture from uncapped honey.

The moisture content for some combs of uncapped honey ran as high as 23.1 per cent before heating, while afterwards the highest was 17.3 per cent. This means that all uncapped honey after treatment was well within the limit of first grade. Capped honey was also reduced in moisture content, although not to the same extent. In the case of super No. 314, the total amount of moisture removed was great, yet the capped honey in this super only lost 0.4 per cent of moisture as against 5.1 per cent for the uncapped honey. These results were determined by the refractometer and are given in Table II.

It may be observed from Table II that in two cases supers No. 256 and 309 the loss in moisture as determined by weighing was slightly greater than the loss as determined

TABLE II—Loss of moisture as determined by the Refractometer from honey in combs set above steam heated radiator for 12 hours

Super No.	Amount Capped	Moisture Content in per cent Before Capped	Before Uncapped	Before Weighted Average	After Capped	After Uncapped	After Weighted Average	Loss
256	4/5	17.6	19.7	17.9	17.3	16.8	17.2	0.7
335	1/2	17.6	20.8	19.0	17.2	14.7	16.2	2.8
309	3/4	16.9	17.2	16.9	16.7	15.3	16.4	0.5
229	2/3	17.6	19.3	18.3	17.4	15.7	16.7	1.6
314	1/2	18.7	21.0	19.6	18.3	15.9	17.3	2.3
338	1/4	15.7	18.5	16.9	15.3	14.2	14.8	2.1
334	1/8	17.7	19.4	19.2	71.1	15.9	16.1	3.1
Average		17.6	19.7	18.3	17.1	16.1	16.3	1.8

by measuring the moisture content of the honey. These were practically full of honey which was nearly all capped. The remaining supers lost increasing amounts depending on the amount of honey in the super, the original moisture content, and the amount of capped honey.

General Discussion

While the average rate of air flow in these experiments was 760 feet per minute it is possible that a lower rate might be satisfactory, as it has been found that for drying fruits the rate should be between 300 and 1000 feet per minute.

As the speed with which the air can pass through a super depends on the number of combs and how well they are filled, so also it depends on the number of supers through which it must pass. It is considered necessary to use a power driven fan capable of forcing the air through a number of supers at one time.

Since it is heat that does the work of evaporation this must be supplied from some source. Hot water or steam pipes laid horizontally beneath a supporting platform for the supers would be satisfactory in supplying evenly distributed heat.

It is possible to determine from tables how much air is necessary to carry the heat and how much air is necessary to absorb the moisture given off by the honey in being "ripened." Since the former amount is always much larger this is the only determination that needs to be made.

Results expressed in Table II would indicate that 1.8 per cent of moisture was removed while those of Table I indicate but half that amount, 0.9 per cent. This difference is the result of the methods used and the true result lies between these two figures.

Conclusion

The custom of extracting honey before it was capped has given way to the practice of leaving the supers on the hives until the honey is at least two-thirds capped. Even at this and sometimes when the combs are completely capped some beekeepers find it difficult to produce first grade honey.

The consequent fermentation resulting in honey of high moisture content has made it necessary to find some means of reducing the moisture content of honey. This is most easily done while the honey is still in the comb. Uncapped honey of high moisture content loses its moisture readily to heated air flowing over the combs. Even capped honey is lowered in moisture content when hot air is blown over the cappings.

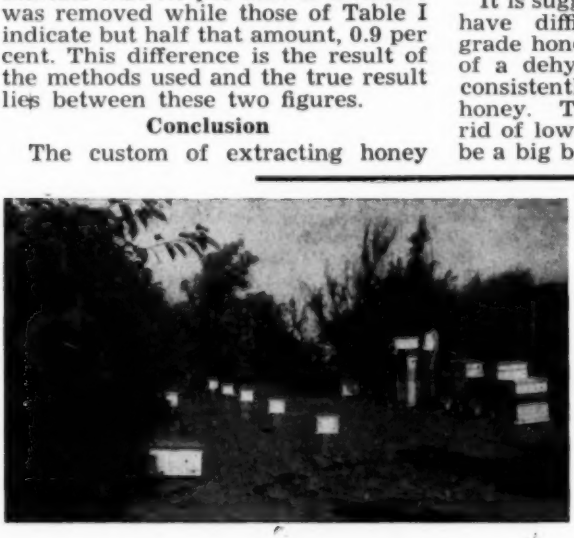
The temperature of the air must not be much above 100° F. or the combs will be melted down.

It is satisfactory to use ordinary air from the outside, but the drier and warmer the air used the less heat will be required.

Forced draft is necessary to carry the heat to the combs and carry away the moisture. While a rate of 760 feet per minute has been found satisfactory this is not necessarily the best, and recirculation of the air is desirable.

The rate of evaporation from the honey in combs decreases with length of time. Twelve hours has been found to be sufficient time to use in treating honey of all stages of ripeness. However, experience is necessary to determine the length of time necessary for best results.

It is suggested that beekeepers who have difficulty in producing first grade honey may, by the installation of a dehydrator room, or chamber, consistently produce first grade honey. The market would thus be rid of low grade honey which would be a big boost to honey marketing.



Part of the queen-rearing yard of Alfred P. Johnson, Rankin, Ills., and his 15-year-old son.

Canning Victory Garden Surplus

By Mrs. Benj. Nelsen

Checking the canning supplies. To test rubber rings, fold together and press fold. The rubber should not crack.

Up from the basement, down from the attic, out of storage rooms and closets, the parade of glass jars continues, for Mrs. Victory Homemaker is intent upon canning her Victory Garden surpluses and every pound of fruit available. Women who for many years have not indulged in canning will be right in the thick of the fray, filling jars to insure a continued Victory Health program—not alone because of the fact that it may be difficult and costly to buy these foods, but because it is one way in which those of us who must remain at home and who can do little else toward winning the peace, can make a substantial contribution to our beloved country in its hour of need.

Unless restrictions on sugar rationing are lifted more than seems likely many of these victory-minded canners will be investigating the canning possibilities of honey. And honey will not "let them down"! Skillfully used, honey imparts a delightful flavor in addition to safely sweetening foods canned in its liquid goodness. A clear, clean-cut sparkle characterizes all honey canned jars of fruits or vegetables. Any food successfully canned with sugar can be canned with equal (and more!) satisfaction if honey is properly used.

It is difficult to give exact instructions as to proportions of honey and water in preparing the honey syrup. Personal taste and the product to be canned will be the determining factors. It is important to remember that (1) Cup for cup, honey is 25% sweeter than cane sugar ordinarily used. (2) The honey flavor intensifies with time.

How to Make Honey Syrup

No. 1. Thin Syrup—Use 3 cups water to ¾ cup honey. Bring to boil in a large kettle and skim off foam.

No. 2. Medium Syrup—Use 2 cups water to ¾ cup honey. Bring to a boil in large kettle and skim.

No. 3. Heavy Syrup—Use 1 cup water to ¾ cup honey. Bring to a boil in large kettle and skim.

Thin syrup is used for small soft fruits: peaches, berries, sweet cherries, etc.

Medium syrup is used on sour berries acid fruits such, as cherries, gooseberries, rhubarb, etc.

Heavy syrups are used on larger sour fruits that are to be extra sweet.

After the honey syrup has been prepared, any method—open kettle, cold pack, oven canning, or pressure cooker—may be followed, observing with care the basic principles of good canning procedure.

Now for a few precautions for a good seal without which no self-respecting food will keep, be it canned with honey or no. Glass jars are most commonly used for home canning. Both screw top and glass top jars are satisfactory. When using screw-top jars, be sure edges of the lids are smooth so the top will fit perfectly to insure a perfect seal. See that the jar has no nicks where the seal comes. The automatic seal-top jar requires no rubber but new tops must be purchased each year. Jars and lids should be washed, rinsed, and placed in hot water until ready to use. Rubber rings should be used only once. Rubber deteriorates with age. To test the jar rubber, fold it together and press the fold with the fingers. The rubber should not crack. After the processing period is done, jars with vacuum type seal should be allowed to cool, right side up, then inverted to test for leaks, and then turned right side up. And DO remember: Do not attempt to give an extra twist for good measure just to be sure the lid is sealed before storing. To do so may break the seal.

August, 1940, Gleanings deals with fruit juices, a delectable canned fruit salad, fruit pickles, butter, catsup, and Harlequin marmalade. August, 1941, Gleanings treats the subject of pickles and relishes from beets and cherries to cucumbers and peppers. If you do not have these issues, it will be wise to obtain them.

A long fat envelope stamped with "On His Majesty's Service" reached my desk some time ago. Opening it I found a most interesting letter from L. Blair, Apiculturist, Government of Western Australia, Department of Agriculture. In part he wrote: "A Conference of Beekeepers is held annually in Western Australia: Honey Week celebrations are then carried out, during which period a Honey Week Competition takes place. In order to make known and further the use of jams made with honey in preference to cane sugar, this item was included in our recent Competition, and to this Section I donated two prizes personally. I am very pleased to be able to state that this Section met with very gratifying response. One of the regulations was that competitors had to submit their recipe for each entry. I have taken copies of the recipes sent in with the entries, and am enclosing a set herewith for your information."

A number of these I give you now; others may appear from time to time, as fruits are in season.

Honey, Grape, and Apple Jam

Take 1 lb. of half ripe apples, 2 tablespoons of sugar, 8 tablespoons of cold water, 4 lbs. of large black grapes, 2½ lbs. mild candied honey.

Put apples, sugar, and water into a stewing pan. Cook and strain as for apple jelly. Should be about half a pint of strained juice. Remove the seeds from the grapes. Pour into a rather large stewing pan, add the prepared apple juice and honey. Bring slowly to the boiling point, then boil briskly for 1¼ hours or until a little will set on a plate.

Pear Jam

Eight lbs. pears, 6 lbs. honey, 1 lb. preserved ginger.

Peel pears and cut pieces, not too thin. Add a little water and boil till tender. To this add the honey and preserved ginger (cut up to same size as fruit.) Boil for 2 hours.

Apple Jelly

Put on to boil, 6 lb. apples—red ones preferred—in a preserving kettle, cover with water and let boil until mushy. Strain through a jelly bag, and to every pint of juice add 1 lb. of honey. Boil until it jellies when tested in a plate.

Honey-Fig Jam

Six pounds figs, 1 lemon, preserved ginger, 5 lbs. honey.

Wash figs, cut up, and pour over 1 lb. of honey. Let stand over night. Add juice of lemon and boil until cooked. Add remainder of honey and boil until thick.

Melon and Honey Jam

Six lbs. melon, 1 lemon, 3 lbs honey, ½ lb. preserved ginger.

Dice melon in small squares, cover with 1 lb. honey and allow to stand over night. Add lemon juice and rind finely cut. Boil until melon is cooked, add remainder of honey and boil until thick.

Grape and Apple Jam

Twelve lbs. grapes, 5 lbs. apples, 10 lbs. honey, juice of 1 lemon.

Wash and stalk the grapes. Peel and core the apples. Put grapes in pan and break them, add apples, and boil the grapes till soft, then gradually add the honey and lemon juice. Boil gently till clear and jellies.

Quince Jam

Two lbs. quinces, 2 lbs. honey, 1 lemon.

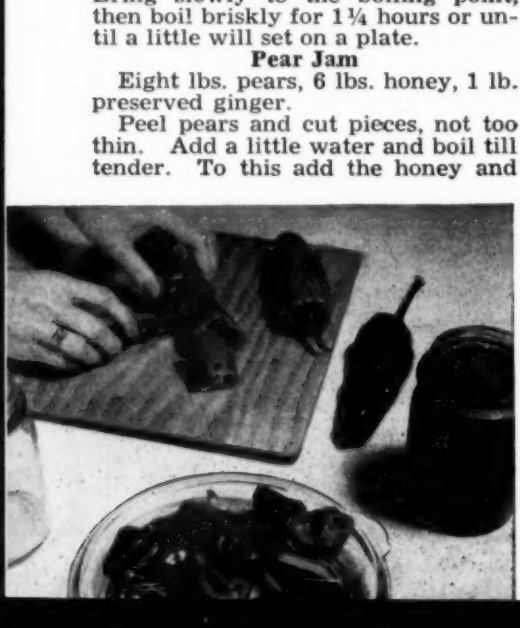
Clean quinces, peel, core, and cut them into quarters, put into pan and cover with cold water. Cook till tender. Take out the quinces, strain peeling from the liquid, put honey into the pan with the liquid, putting back the quince, cut into very small pieces. Add lemon juice. Cook altogether, stirring all the time till it thickens.

From a thoughtful, honey-minded friend, Mrs. Henry E. Piechowski, Redgranite, Wisconsin, comes the following scrumptious sounding recipes:

Honey Corn Relish

Two dozen ears corn, 1 bunch celery, 2 green peppers, 2 red peppers, 2 tablespoons salt, 3 tablespoons mustard, 3½ cups vinegar, 2½ cups honey, and 6 onions.

(Continued on page 510)



Can your own peppers and you won't have to forego those bright bits of garnish because the budget won't stretch to include luxuries.

Blitzkrieging a Bee Tree

By John P. Hollis, Jr.

Had Dad suspected that down in the ravine there reposed a newly-painted hive, and that I had made final preparations for cutting the elm tree down in the east pasture, he undoubtedly would have laid down a decree to the effect that under no circumstances was I to "lay off" from pea picking while he went to town that Saturday in August.

Dad liked to watch bees work on clover blossoms and he liked honey as well as the next one, but as for having bees around, he put his foot down; he also threatened to raise it in the general direction of the seat of my pants if I disobeyed his orders. But I was around 15 years old and had Dad pretty well trained, and so figured I could have a hive of bees by conducting a policy of appeasement with him.

After Dad had left for town I went out to the barn, placed my brand new smoker, veil, and hive tool in my pea sack and headed for the pea patch. Stopping at the pump to get a drink of water, I rattled the pump handle loudly so that Mother would notice I had my sack and was prepared for work. I only hoped that she wouldn't miss her butcher knife before supper.

As my confederate in the bee-tree cutting scheme, I had wisely enlisted a chum who lived on an adjoining farm. He was big and brawny, weighing around 190 pounds. Although he was at the foot of his class in school, Elmer was an artist with an ax. For his part of the deal, Elmer was to get half of the surplus honey taken from the tree.

Down in the ravine, ax tuned up like a razor, Elmer stood beaming as I came up. An old cross-cut saw lay on the ground. Heavily armed, we headed for the east pasture to "blitzkrieg" the bee tree that I had found a week before.

Arriving at the tree, our enthusiasm was slightly dampened. It was hot and the bees clustered about the entrance six feet from the ground. They appeared pretty confident of being able to take care of themselves.

Elmer had fashioned himself a veil from an old window screen. I pulled out the new smoker and lighted up the roll of burlap according to directions read in an old copy of a bee magazine. I surprised myself by getting a good smoke started.

The bee tree that was "blitzkrieged."

At the first puff of smoke on the clustered bees they gave an alarming roar and began circling about threateningly. Bravely we began sawing down the old elm. Soon the tree fell with a crash. We hadn't been stung yet, but there were several close calls. The way those bees would back up and strike Elmer's veil, which extended about two feet above his head, was unnerving.

Elmer had cut several bee trees before and knew his business. He removed a section of the trunk two feet on either side of the flight hole. A mass of brood combs and some dark dark honey lay exposed. We were disappointed for there appeared to be little surplus honey.

Undaunted, we smoked the bees out of the trunk and fitted the best brood combs into the empty frames of the hive. They were held in place by wrapping twine around the frame. We spotted the queen — a beauty! However she was shifty and darted into a crevice. Finally we

coaxed her on to a twig and dropped her into the hive. Soon most of the bees caught on as to what was wanted, and I had that never-to-be-forgotten feeling—a newly-made beekeeper!

Elmer, it appeared, was the loser in the deal. Also I had depended heavily on taking some mild clover honey home to appease Dad and thus sweeten his disposition while I broke the news to him.

Idly, Elmer tapped his ax against a large hollow limb that ran off from the trunk. Suddenly he struck it a sharp blow.

"B'gosh!" he exclaimed, "that hollow's got something in it. Sounds just like a ripe watermelon!"

We Strike a Gold Mine

With aroused hopes, we leaned down and inspected the passage leading to it from the main trunk. A small hole, about the size of a half dollar, it didn't look very promising. It was almost clogged up with fragments of dead bark. With my hive tool, I scraped out the bark. I jumped suddenly as a stream of infuriated bees shot out of the hole like water from a hose. Elmer grabbed up the smoker and began puffing furiously. We were now so excited we hardly noticed the few stings we received.

Like an erupting volcano a seemingly never ending stream of bees poured out of that small hole and took to the air until the atmosphere was dark with their numbers. When the tree had fallen the decayed bark had broken off and completely clogged up the hole. The wood dust, covering up the polished passage, had fooled us completely. In a few minutes we had removed the upper side of the hollow limb.

Our eyes, I imagine, popped out at the sight. Long four-foot combs of light-golden honey covered with delicate snow-white wax. Quite in contrast with the white surface of the combs, glistening blankets of black bees moved aimlessly about.

Regaining my voice, I said, "Guess I'd better run to the house and get some more pails." As I started off, Elmer laughed, "Maybe you better bring another hive, too."

When I returned Elmer had smoked most of the bees toward the hive. A great mass clustered on the outside. Fearing that the bees had come back out of the hive. I lifted the cover. The hive was packed with bees. Lacking any supers, I secured a box and placed it on the hive as an addition. The mass of bees then moved in.

We decided to leave the hive at the tree for a day or so, and trudged home, each with around 35 pounds of delicious honey. I guess Mother was about as enthused as I was with the whole proceedings. As a diplomatic move, we placed a large platter of delicious honey in the middle of the table to meet Dad's eye when he returned home.

When Dad came in the door his eyes lit on the honey and he made a bee-line for it. "Where did you get it?" he asked, taking up a generous sample.

"Elmer and I cut a bee tree," I ventured, "and I got lots more in some pails."

Dad was so interested in the honey that he had apparently forgotten about the pea picking.

"This is a pretty good year for bees, so the boys in town tell me," said Dad. He then added thoughtfully, "Maybe it would have been fine if you could of hived them bees, son."

"That's what I did," I replied very meekly .

Dad looked surprised for a second, but he didn't say anything. I even got him to help me nail up some badly needed supers for the crowded colony to take care of the fall honey flow from smartweed.

Stillwater, Okla.

Inner cover from a moth-infested hive containing combs that were not properly cared for. Note how the moth larvae have tunneled into the wood.

Major Honey Flows Related to Length of Day

By Isaac S. Diller

I am engaged in beekeeping in two states where climatic conditions and flowers are as different as the antipodes. In northwestern Pennsylvania our major honey flow is from the clovers and occurs from the tenth of June to the tenth of July. Our minor honey flow occurs from buckwheat in late August and early September. Now there are other flowers which produce nectar in Pennsylvania, a great many others in fact. I have personally seen bees gather nectar and pollen from forty different plants. I have examined the pollen of some of these plants on the bees' legs and also from the plants themselves. It is very interesting to correlate the bringing of pollen from a certain plant and the kind of nectar which is stored in the cells of the hive about that same time. For instance, from some hives placed in a thirty-acre alsike clover field, there is no other pollen brought in except yellow well-packed clover pollen. The nectar gathered then is clear and light-colored.

When the clover has been cut and the sumac starts to yield, the pollen is white and the nectar is a golden color. I wonder whether the reason that clover stands as the major honey plant in Pennsylvania is because the clovers bloom at the time of year when that area has the longest days.

Florida is the other state in which I have bees—in Miami, South Florida, and within a radius of fifty miles of that place including the Florida Keys. The major honey crop is from the black tupelo. This occurs in the northern part of Florida in April. This tree does not grow in South Florida and is certainly an exception to my rule! Here the best honey crop is the black mangrove and thistle. Both of these plants bloom during the longest days of the year in June. The saw palmetto is a little earlier, and the orange still earlier than the others. As far as the number of flowers in this district is concerned, the Florida sunflower or bidens species, also called beggar ticks, are the commonest. But these plants blossom in the fall and winter months when the days are shorter and the bee activity thus curtailed.

The flow of nectar has long been an uncertain and unpredictable element in beekeeping. From the commercial standpoint, it is by far the most important. A great deal has been said as to strength of colony, the storing instinct of bees, freedom from swarming, and other things requisite for the production of a large honey crop. But it is always necessary to have a prolonged heavy nectar flow of marketable honey to get a profitable crop. This stands to reason. But there is one more condition that seems almost essential, the heavy flow of nectar should occur at the time of year when the longest days occur.

With this in mind I look over the other states in the Union as reported by Everett Oertel in "Honey and Pollen Plants of the United States".

Take California, for example. The sages grow there. The black sage leads in value of honey, that is, it leads the major honey plants as far as value of the crop is concerned, but I suspect it does not lead in amount of honey produced. Alfalfa and wild buckwheat are given as the second and third important honey crops. They both bloom profusely in June.

In a great many states, perhaps a third of them, the different clovers are given as both the main and second best honey crop. As an example, Alabama white clover finishes blooming about June 21, while the sweet clover is at its height at this time. In this state sweet clover is listed as the major honey crop. Although cotton which blooms here in June and July is given precedence over white clover, at the same time white clover blooms in Alabama four months of the year.

In Wisconsin the order is white clover, then sweet clover followed by alsike clover. These three plants are the only nectar-bearing plants blooming in large numbers on the 21st of June.

That is one of the reasons in my estimation, why honey production is so good in our clover belt and in Canada, because the clovers bloom there during the longest days in the year.

(Continued on Page 503)

From the Field of Experience

LITTLE HELPS AROUND THE APIARY

By C. O. A. Kramer

Troubled with bee-glue sticking to the fingers? I keep a tin of crank case drainings handy, dip in my hands, rub them a bit and the propolis comes right off.

If you don't like crank case drainings—and some folks are allergic to it—get a can or two of Kitchen Klenzer—wet the hands—sprinkle on some of the Kitchen Klenzer, rub briskly and, presto! the bee glue is gone.

If it troubles you by getting under your fingernails, dig or scrape the nails along a bar of common yellow laundry soap, getting plenty under the nails. Then when you wash your hands, propolis and soap comes right along.

Sometimes the hive tool gets so sticky that you can't drop it out of your hand. You've got to get another scraper to scrape off the hive tool. Try coating the hive tool with a little lubricating grease before you start and you'll find the stickiness vanish.

Formerly, where the ends of the frame tops rested on the rabbet, there was so much propolis that it was almost impossible to pry out the frame without breaking. Now, I dip a finger in a can of lubricating grease, rub it along the rabbet and frame top ends and I find the bees carry their glue elsewhere.

An old idea, but worth repeating, is the use of a bait section if you're trying for section honey. I put on three section supers and all the bees did was to gnaw holes in all four corners. Then I put one of last year's incomplete sections in each super and in less than a week every section in each super was drawn out and some of them filled and capped. Seems like you've got to show them what you want done.

Another good idea to keep hive body and super edges from splitting when you insert the hive tool to pry them apart, is to smear a little of the same lubricating grease on the edge where you generally insert your hive tool and you'll find the work about 50% easier and neater.

A word of advice for beginners who go for extracted honey: Get all the foundation filled frames possible drawn out for your next season's crop. I find that a good swarm will fill a super of drawn-out comb in less than one-third the time it takes them to draw out new foundation. I have in times past, extracted five supers on one hive, put them back on and in ten days they're practically all filled again and some partly capped.

River Forest, Illinois.

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"LOVE'S LABOR NOT LOST"

By H. E. Coblentz

Principal Emeritis of South Division High School.

Once upon a time—"longer ago than never at all and farther away than nowhere"—a young man named Coblentz began his experiences with honey. To be more exact in his chronological career, it all began when he first met his honey girl at church. She was most adept at catching the queen when the bees swarmed in her father's Hoosier orchard. She sure caught that young buzzing drone that Sabbath day in the long ago. In due course of time and in the regular course of state and church they were married. It was a case of milk and honey (!) or as she would have the tale—a case of water and honey. She was the honey. He was the water—"unstable as water thou shalt not stand"—alone! And, so it is even unto this year, 1942.

In that immemorial year of the far away days the young buzzer began to teach or rather to talk at young things in a Hoosier village. There and then began his real or imaginary troubles with honey. (Not his Honey Girl, whom he did not marry until Thanksgiving Day of that same memorable year.) For one evening at Mrs. Moore's boarding place he did eat much of hot biscuits and much honey. At seven o'clock of that selfsame evening he thought in successive waves of pain: "(1) I shall die". (2) "I am sure I shall die". (3) "Why don't I die?" But he isn't dead yet. For almost fifty years, however, he never again touched hot biscuits and honey.

Then came, in long after years, the Honey Woman at Madison whose business is making all people honey conscious and honey mad. This Honey Woman and the Honey Girl of his youth did gang up on the honey-

less man in 1942. Again, after the long, lean, un-honeyed years, he did partake of hot biscuits and honey of various kinds, but especially sourwood honey. Did the old, long-remembered combination make him ill? They did not! And, he rejoiced much in heart and in the way to a man's heart—that is, you know, via his stomach.

All Hail to the Honey Woman and to the Honey Girl who still abides with him after these many, many years, And, blessed be the bees and honey.

Milwaukee, Wisconsin.

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BEES MAKE GOOD 4-H CLUB PROJECTS

By H. L. Cooke
Assistant County Agent, Nash Co., No. Car.

Four-H club demonstrations aid greatly in getting a good idea or program into effect in any county. This is particularly true in beekeeping because it is suited for a 4-H project probably more than some other activities. Club members are taught to appreciate wild life, plants, and insects. They study fruit growing and other phases of agriculture. Beekeeping ties in perfectly with these other 4-H projects.

Here in Nash County in view of a probable sugar shortage the Extension Service is sponsoring a drive to get more and better bees into the County. Even if there was enough sugar, many farm families who do not have bees at the present time, should keep a few for home use. The 4-H Clubs are being used largely to introduce the program. More interest is created by offering a free trip to the summer 4-H Vacation Camp for the member conducting the best bee member in the county.

In getting a 4-H club member started in beekeeping, several things should be considered. In the first place, the club member should not start with too many bees. Two or three hives are enough. Probably the first step in starting a 4-H club member in a bee project is to get him to subscribe to a good bee journal. He should be assisted in the selection of proper equipment. At the regular price of factory-made hives, home-made equipment should be discouraged. Since extracted or chunk honey is easier to produce than sections, it is probably better to begin with shallow or full-depth extracting supers. Where there are several club members in a county, it is possible to buy a honey extractor together. If there is more honey produced than needed in the home, it can be usually disposed of locally at a good price. It is true that not all projects in bees are completed in a creditable manner, but this is true of any other type of project. If the club members are given proper help, a large percentage will do well. There are always some who become interested enough to gradually increase their apiary.

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HEREDITARY DIFFERENCES NOTICED IN PACKAGE BEE STOCK

By Wayne Keller

Many people seem to have no respect for the importance of hereditary characters. They fail to recognize variation within a strain of livestock and place little significance on variation between races. The subject of gentleness, that seems so essential in the bee is ridiculed. No doubt the weather and the condition of the colony causes bees to sting worse at some times than at others. That does not account for all cases.

The past summer there were six colonies in my yards that never failed to be very disagreeable whenever they were handled. Four were from one source and two from another. All these were common Italians and good honey producers. Some of them made 300 pounds of honey, but so did several colonies that seldom showed anger no matter how or when they were examined. Next to the above six in handling quality were the majority of my colonies, all requiring smoke to prevent being angered. The best colonies to handle this year were few. They consisted of one Carniolan colony, one common Italian, one golden Italian, and four Caucasians. Smoke was not needed to handle these. There was apparent variation within this last group, the Carniolan and the golden colonies being very steady on the combs.

Drones of different races were marked differently, except the Carniolan and Caucasian. Queens of the two dark races can often be distinguished. Some common Italian colonies whose workers looked alike had drones of different color, though the queens were similar. Two lots of golden drones were used to mate queens in one family. The worker progeny showed the difference in the two lots, for one gave some common

marked bees. This may be a good thing, as they were from more vicious stock.

The Italian colonies continued brood-rearing in the fall later than the Caucasians. The latter carried honey from outer combs to the cells last used for brood. They seem to do this more than Italians, as a rule. Some small Carniolan-Italian hybrid colonies ceased brood-rearing first of all and carried honey to the center combs until they were quite full, leaving very few cells open for the cluster. It seems to me that a colony, when it has reared 40,000 bees for winter should stop brood-rearing as the dark races did. That would leave a good pollen reserve for spring and a honey reserve for stabilizing the temperature inside for the worst part of the winter. It will be interesting next spring to see whether the overpopulous Italian colonies with their pollen reserve already used or the Caucasian colonies will be ready to divide first. How do Carniolans build up earlier in the spring, if it isn't by leaving their pollen reserve alone in the late fall? The golden Italian colony left lots of pollen, but had a large winter cluster also. Several drone-eyed workers emerged among the inbred progeny.

Lakeside, Nebraska.

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MOUNTAIN SPURGE

By C. W. Wood

A plant which came to me several years ago from West Virginia labeled Mountain Spurge and turned out to be what botanists know as **Pachysandra procumbens** has proved to be very attractive to the bees. It grows naturally, according to the floras, in mountain woods from West Virginia and Kentucky to Florida, and under cultivation seems to prefer a fair degree of moisture in addition to part shade. Running true to form in such matters, plants from the southern part of its range proved not hardy in northern Michigan, while others from West Virginia were entirely so.

The stems are quite prostrate, forming mats of deeply-toothed leaves, which are said to be evergreen in the south, though they are dropped here at the approach of winter. The crowded spikes of white to purplish flowers in early spring are much sought after by the bees, which seem to find an abundance of nectar. The available literature on honey plants does not mention this one as yielding a surplus anywhere in its range, but I suspect from behavior here that observation would show that it does. Can any of the beekeepers in the Southeast throw light on it.

Incidentally, this plant is closely related to the Japanese Spurge, **Pachysandra terminalis,** which is much used in ornamental plantings.

Copemish, Michigan.

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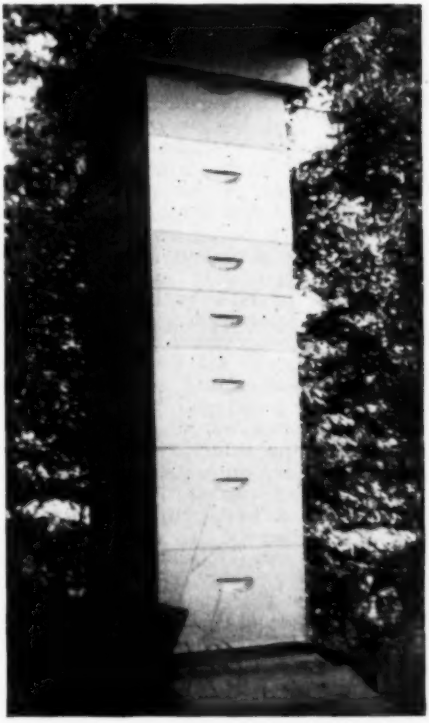
IT PAYS TO USE FULL-DEPTH FOOD CHAMBERS

By Roy A. McDuffie

The colony pictured was developed from a swarm which I caught in 1940. I gave the bees a full-depth food chamber and they filled it up in nice shape that fall. You can see what my bees did in 1941 when given a nice modern hive and plenty of supers to work in. So by following the advice in the bee magazines and using a full-depth food chamber I do not have to feed in the spring. I do have to watch strong colonies and give them lots of room early so they won't get in the swarming mood.

Big Rapids, Mich.



A sky-scraper developed from a swarm.

A YOUNG HONEY SALESLADY

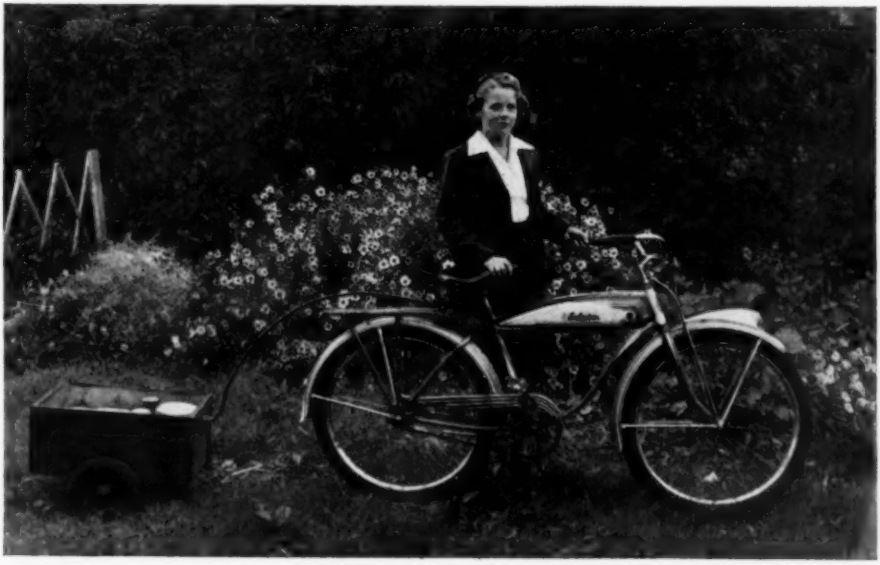
By Mrs. Benj. Nielsen

Albert E. Wiggam, D. Sc., in his famous newspaper question and answer column maintains that this is still a man's world. This statement or conclusion, however, is not the whole truth in all cases—at least not in the honey-selling game. Twelve-year-old Betty has proven beyond doubt that it is not the male persuasion alone that can, and does, make a success of honey salesmanship.

Even as most children, Betty wanted more spending money. In addition to the ordinary youthful wants, she just had to have a bicycle, one of these modern streamlined ones. After deducting routine expenditures from her earnings, her savings were not stacking up fast enough to suit her. So she kept begging for permission to try her hand at door-to-door honey selling on a commission basis. Reluctantly, we finally gave our consent last fall, fully expecting her to give up after a few attempts. But I guess we didn't know our Betty—or perhaps we had not realized the intenseness of the desire, or determination to possess a new bike with all those gleaming extra accessories!

Twelve-year-old Betty starts out on foot in her door-to-door selling.

Neither refusals nor inclement weather dampened her enthusiasm. Night after night, she dashed home from school, filled and weighed her jars and pails, slipped into layer after layer of her warmest clothes and off



Betty gets around lots faster now with her load behind the sparkling new bicycle that honey commissions paid for.

she went. We were amazed at her stick-to-itiveness! When the thermometer hung close to zero, we thought it better for her not to go. "But, Mom! this is the very best kind of weather to sell honey! The colder it is the better they buy!" And she would come home with fingers and toes stiff and tingling, weary but blissfully pleased with her sales and commissions.

At all times Betty has been most careful about the appearance and handling of her offerings. A quality product, attractive containers, immaculately clean, and neatly labeled. No sale was too small for her most careful attention; many a pound, or pint trial customer, turned out to be a regular 5-pound or gallon customer. She has had a lot of questions to answer; and, having been around bees, cooking with honey and being exposed to "bee talk" at breakfast, dinner, and supper, she usually had ready answers. Betty was paid 1½ cents per pound commission.

Pictured is the bicycle honey commissions paid for. These earnings represent only the time spent after school, Saturdays being otherwise employed. They were earned in a town of less than 3000 population—and on foot. Much to our gratification, she showed no inclination to stop selling when she had acquired her bicycle. Possession of a bike made it possible for her to make quicker delivery; enabled her to cover a wider area than before.

By this time, our little saleslady had become so thoroughly sold that she decided to invest in two colonies of her own. Now this year she is selling her own honey and continuing on a commission basis for the Nielsens. Does she want something else? Yes, you have guessed it—she wants a trumpet so she can play in the high school orchestra next year! More power to her wants—they are a boost to honey sales!

Aurora, Nebraska.

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BOTTLING HONEY IN A FARM KITCHEN

By Elbert K. Fretwell, Jr.

Many small beekeepers who cannot afford equipment, or who operate only a few stands of bees find numerous difficulties when it comes to bottling their product for the market. They are faced with the problem of avoiding large investments, but also with packaging their goods with a minimum of effort. On the market, the honey from small producers must compete with large commercial apiaries so it is important that the finished product look well.

In the fall of 1939, I had a few hundred pounds of good quality honey from my small bee-yard and no place set up to extract or bottle it. Since beekeeping is chiefly a hobby sideline with us, I did not feel that it was worthwhile to set up a regular honey house, or buy extracting and bottling equipment. By a good piece of luck, however, I made arrangements with a neighbor, a larger beekeeper, for the use of his extractor. On a certain evening I hauled the frames of honey, just removed from the hives, the few miles to his house. After extracting the honey from the combs in the usual manner, we proceeded to haul the supers of frames and the extracted honey home. Here our lack of equipment almost proved to be our downfall. It was all right to load the sticky supers and frames into the back of the car, wrapped in newspapers, but the honey itself was a little different matter. We had only five-gallon pails without lids for the honey. By careful driving and continually watching we were able to get the honey home without spilling any.

Being late in the evening by this time, we decided to wait until morning to do the bottling. In the meantime we set the buckets of honey on a hot-air register over a slow fire where the honey would keep warm and liquid through the night.

The next morning the honey was very liquid, about 150° F. The bucket of wax cappings and drippings that we had also heated was quite liquid, too. The wax was all on the top, so we were able to skim it off to get at the honey. The other buckets with the greater part of the honey had only a little scum on the top, as the honey was of good quality. We did skim off the small bits of matter, however, prior to straining.

Then we ran the clearer honey through several layers of cheesecloth over a sieve, and into a large preserving kettle. From this kettle the honey was dipped directly into the jars, with a small hand dipper, holding just enough for the 1-lb. container. Previously we had washed the jars with boiling water in a large dishpan. In bottling, the jars were filled to the neck (that being the 1-lb. mark), wiped off, capped, then wiped off

again prior to labeling. The boxes that the bottles had come in were just right for storing and shipping the bottled honey. So far we had had no trouble except that the "dipping method" of filling jars proved a little sticky. This can't be avoided without using a tank or can with a valve-gate.

We had a little more trouble with the honey that had been with the wax shavings, however. After straining it through cheesecloth several times it never assumed the pure clarity that the other honey had. That is why we marked this honey for home use. **It is poor business to put an inferior quality honey on the market under one's name.** By selling only the No. 1 honey we have built up a name, during the past year, for good quality.

Much of the success of our sales was due, no doubt, to the label we used. Although of stock variety, it was of pleasing color and size, and was neatly put on the jars which were well washed on the outside as well as on the inside. All of our sales were made door-to-door, or on order from friends and people who had heard about our product. Many of our sales were made on word-of-mouth recommendation, which proved to be a very good advertisement. All in all, we sold three times the amount of honey that we produced, as additional stores were bought from our neighbor. We took particular care, however, that the quality of this honey measured up to our own, and took the same care in bottling it.

We are still having requests for more honey from satisfied customers and people who have heard about it. Keeping a list of past customers and people interested, we will be able to build up the business to a greater degree next year when we hope to have more colonies producing.

All in all, I think we have had a very profitable season and have built up a name for our honey in the limited area in which we sell. By the careful methods of packaging and selling, I have found it no disadvantage to have my "warehouse" nothing but our farm kitchen.

New York City.

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BEST BEE-WATERER OF ALL

By Percy H. Wright

I have discovered what I believe to be the best way of all to make a bee-waterer. A metal vessel is used, so that there may be no cracks to open in the drying portion above the water line,as would be the case with a wooden vessel. The vessel should have straight sides and be at least of medium depth.

The prize feature is the heavy float. I made mine out of 1¼ inch boards crossed at the bottom by 2 by 4's. The amount of wood is to give buoyant power.

On top of the float is placed a layer of spagnum moss, the ordinary moss such as nurserymen use for packing their trees. The buoyancy is necessary to keep this moss above the water line. Bees just love to suck their moisture from moss, and cannot drown when the entire water surface is moss covered. In the absence of moss, several layers of burlap sacking would probably do as a substitute.

One should give some attention to the watering of his bees, for open water is sure death to these thirsty little creatures. From the number of times a bee will hit the water in flying I doubt if they really see a water surface clearly.

In cold weather it would be good if we could warm the water. Sometimes just to draw up the cold water seems to paralyze the bees with cold. A few days ago we had a cool, soggy evening, darkening early. Next morning I went out to refill the waterer, and found dead bees congregated in little knots on the moss. Even though they had never touched open water, and the water had had several days to get to atmospheric temperature, the bees that came for the last drink had been too chilled to go home. It set me to wondering how many bees of those that go far afield in the cool months of spring, when clouds and showers may come at any moment, are lost. It must be a rather hazardous business, to be an Italian bee in a northern climate.

Moose Range, Sask.

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PAINTING; ITS UTILITY AND APPEARANCE

By Earl S. Days

It was with much interest that I read Mr. Conner's article in the July issue of Gleanings about painting. Now I am only a back-lot beekeeper with a comparatively small amount of equipment, but I do have a keen personal regard for its appearance. And, incidentally, I wish it to main-

tain not only a good appearance but a condition that will counteract the destructive action of outdoor weathering.

I have used several varieties of outside white paints during the course of about ten years, also I have used aluminum paint, but for the last four years I have used the latter exclusively on my bee equipment, chiefly because of its appearance. Although I have not kept any records of performance of my paint jobs, I am convinced that two coats of aluminum paint properly applied do outlast two coats of any of the white paints I have used, as far as protection against weather is concerned. And I do admire their silvery sheen. Also I believe the bees like it. At any rate, I have no record showing that a colony ever evacuated an aluminum-painted hive because it was too hot for it. Quite to the contrary, my best producing colony in 1940 stood in the open with not a bit of shade. And it has been quite hot here so far this summer. And the same colony at the same location is a shade ahead of the average for all of my colonies again this year.

I freely admit that neither the type of paint nor its location in the open necessarily had any influence on the colony yield. But something did have its influence. Was it the queen? Possibly. However, her colony is less populous than a colony nearby which is in complete shade. Of the other factors to be considered which might influence colony yield, I can think of none that might apply in this particular case.

So it seems to me to be a fairly good combination,—aluminum paint and an open location. I do believe that Mr. Conner has made an excellent point regarding durability when he advocates a prime coat of a ferric oxide paint with a finish coat of aluminum, and I intend to practice such a procedure for the better protection of all of my new equipment.

Wadsworth, Ohio.

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SECOND GLANCES

By C. M. Isaacson

That bee on the cover of the July issue certainly strikes the eye as one first picks up the issue. It is a fine picture and an appropriate one.

When the whys and wherefores of nectar secretion are still much of a mystery to those versed in such matters, it is no wonder that many of us are often puzzled (page 393). Most of us have seen a flow come when it "just shouldn't", and vice versa. On the whole, though, weather is the biggest factor, as Dr Merrill concludes in his article.

That other bacteria than the one believed to be the cause of E.F.B. are often present to produce variations in the symptoms sounds logical even to those of us who are not scientifically instructed (page 395). It is work like that told of in this article, by those who know how, that protects those of us who do not.

I like to read of cooperatives that are run as a business—and that New York one described by Mr. Coggshall very evidently is (page 396). That members are not **required** to sell exclusively to the coop is a good feature—freedom of action here will actually mean **better** support. The gradual selling of the crop, together with the advance payment feature, constitute the only really practical and safe method of operation for a cooperative. And that crystallized honey has proven the most popular is of interest; if true generally, it would hit hard at much of the argument for filtered honey.

That the honeybee is innocent in the spread of fire blight has been known for some time. Mr. Smukler gives an effective summary of the disease itself, as well as reports of experiments determining that the bee is not responsible for its spread (page 400).

The information on honey bread-making (page 402) should be of considerable value to a good many. That care (and a little experimenting) should be taken to find the right amount (of honey) to use is important, and attention to this may save disappointing failures. Incidentally, those are certainly "some bakings" that Bro. Pancratius tells of—it is well that honey bread does keep fresh in case appetites suddenly lag a bit.

L. C. Gardner's concluding article on the flash filtering of honey (page 405) presents a well prepared case in its favor, and he is right in saying that the consumer will settle the argument. His mention of the clarity of honey from a comb section usually holds true but at times I have seen it from a little to very cloudy. That care should always be taken in liquefying honey is certainly good advice in any case.

Mrs. Nielsen gives some facts on the advantages of honey that should be kept in mind. Its quick energy value, good taste, healthfulness, and greater sweetening power compared with sugar (hence lessening its "expensiveness")—all are of no little importance and we should miss no opportunity to tell of them.

Apiary hygiene (page 408) is an unusual but true title for the common sense rules contained in the article. Freedom from disease in the apiary is worth a lot and these simple rules should be effective to this end.

There may be a lot in what Percy Wright says as to just why bee venom accomplishes its results in the treatment of "rheumatic type" diseases. It would be of interest to hear of scientific research along this line—that substances developed by the body in resistance to the poison also combat the disease.

I wonder if users of year-around multiple brood chambers (page 416) do not find one thing to be true; that combs in the lower stories tend to deteriorate rapidly. Let's have a comment or two on this point.

Mr. Morehouse's comments on swarm control are to my mind the best balanced to appear yet. His advice and methods are good; and especially so, his conclusion that true swarm control means individual treatment, based on many different factors (page 420).

While swarming in Mr. Holzberlein's locality is accompanied by cessation of egg laying, up here I have often seen queens laying heavily even after cells were sealed, when colonies were neglected enough to get into that condition. That reversing of hive bodies gains time in which conditions may change, if nothing else, is true enough.

That new canning booklet from the American Honey Institute is good, and should be distributed by beekeepers everywhere. The Institute has earned a real support from all beekeepers, and it is up to us to give it.

Middle River, Minn.

AN IDEAL APIARY SITE

A good-sized apiary owned by Adam Bodenschatz, Lemont, Illinois. Note the splendid protection against winds. This is important.

Editorials

Parity Prices of Honey Mr. H. J. Clay of the Agricultural Marketing Admininstration in the semi-monthly honey report calls attention to the parity prices on honey published for the first time in the Mid-month Local Marketing Price Report, June 15, 1942, issued by the Bureau of Agricultural Economics of the Department of Agriculture.

According to this report using 1919-'29 as a base period the June 19, '42, parity price of best extracted honey is given as 10.4c per lb. in lots of one ton or more, F. O. B. shipping point or the nearby delivery point, and comb honey at 18½c per section. The minimum ceiling under Emergency Price Control Act based on 110% of parity is reported in the same publication as 11.4c per pound for extracted and 20.4c per section for comb honey.

The point of the above is that if extracted honey were not included under the General Maximum Price Order and were considered an agricultural product the price ceiling to the producer could not be set less than 11.4c per pound for extracted honey.

At the present time the widely different ceiling prices under the General Maximum Price Order make it difficult for the producer, packer, or retailer to know exactly where they stand.

The fact that these parity figures have been released by the Department of Agriculture might offer some encouragement to the belief that honey could yet be declared an agricultural product and not subject to a price ceiling under the General Maximum Price Order. A price of 10½ to 11½c f.o.b. producer seems to be somewhere in line with the present price asked for first quality honey in large lots.

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"The Mystery of Nectar" The above caption is the title of an article that appeared a few years ago in the Australian Bee Journal, written by one of the editors, R. G. McLaughan. This article aroused considerable interest at the time, especially since comparatively little research work has been done along this line.

This year the honey flow thus far (this is July 21) in some parts of the country has been disappointing. Obviously there must be an abundance of nectar plants and favorable soil and atmospheric conditions to bring a good honey flow.

McLaughlan points out that the life of the plant is divided into two parts: (1) Growing time; (2) Flowering time. During the growing time the plant stores up starch and other substances that it can convert into nectar when it begins to flower.

A wet growing time and a dry flowering time favor nectar secretion. Heavy rain may stop or diminish nectar secretion and especially when continued rain is heavy enough to promote growth in the flowering plant.

What McLaughan has set forth sounds sensible and obvious. It would seem then, that continued heavy rains that have occurred in some parts of the clover belt during the blooming period may have promoted growth in the flowering plants, thus interfering with normal nectar secretion.

Beekeepers may do their part in making it possible for colonies to store the maximum crop but they cannot control the weather.

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That honey is sweeter than most table sweets is now generally admitted. Even if it costs more it goes further. If you have not tried it, the next time you put honey in your table jar or drip-cut, don't fill it quite full—say, within one-fourth of the top. Fill the space with warm water and stir or shake well. When it is of even consistency note how well it pours on to a cereal or into coffee.

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A Glass Hive of Bees In our home yard we have a glass hive with no winter packing which has been showing up well every year. This does not mean that glass is a necessary factor for wintering but it does prove that a vigorous strain of bees with a good queen are two important factors on which not enough stress has been made.

On the other hand, packing and more packing has been emphasized to an extent that it obscures the value of an abundance of good honey

and plenty of pollen. Don't forget the pollen. If you don't have pollen, move the bees where there is some. Gleanings does not belittle the value of packing in localities where it is needed but it does believe that pollen and lots of it will encourage a little brood-rearing in mid-winter. These emerging bees take the place of old bees dying off.

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The new orthodoxy of wintering and good beekeeping is well explained by Mr. Rahmlow in this issue, page 457.

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Upper Entrances not only allow moisture to escape during winter, but on extremely hot days during summer practically eliminate clustering out in front of the lower entrance. In so far as they do this they discourage swarming.

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Fully Ripened Honey Means More Capping Wax

The old rule so often quoted, "Extract the honey when the combs are three-fourths sealed over," is not only ambiguous but capable of downright abuse.This applies to commercial beekeepers as well as to beginners. Suppose there are eight combs in a ten-comb super and that six of them are well-capped over while two of them, one on each side, are barely capped at all. According to a loose interpretation of this ambiguous rule, six combs out of eight, or three-quarters, are capped over. The honey in the outside combs, if thin, is a positive menace to the other honey and should not be extracted at the same time. The best way is to set such combs aside to go back on the hives with the uncapped combs in order that the honey may be fully ripened and sealed over.

The rule is unsafe under some conditions even if three-fourths of the area on both sides of the comb is sealed. Conditions alter cases. If there is an intermittent honey flow, the uncapped honey recently stored may be very thin. Again, such honey hurts the general average.

Many producers priding themselves on the quality of their honey have nevertheless had disastrous experiences on account of fermentation. While the difficulty is worse some seasons than others and while there are other causes, it is safe to say that a careless application of the three-fourths-capped-over rule is responsible for much thin honey. Such honey may not sour or ferment in the producer's hands, but even if it does not the producer suffers a loss of reputation when and if it does ferment later on.

It would be foolish to claim that honey entirely sealed over never ferments, yet in view of the sudden greater need for beeswax by the Army and Navy, it is high time to discard the old rule and extract only from the combs that are just about fully sealed, thus securing from one-fourth to one-third more beeswax and at the same time guarding the quality of the honey. Extracting before the combs are fully sealed over might be considered honey-wise and pound-foolish. However, considering the serious danger of fermented honey, it is doubtful whether from the standpoint of honey alone it ever pays to take such a chance. Even in an emergency a producer cannot afford to trifle with the quality of his product.

Space the combs wide in the supers. In most cases put not over eight in a ten-comb super. Leave those combs on the hive until they are fully sealed, as they are likely to be during a heavy honey flow, and thus secure the best honey and the most cappings. There is no reason why the yield of beeswax from capping wax cannot be raised from one and one-half pounds per hundred pounds of honey extracted to two pounds.

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Don't Experiment With A.F.B.

Some beekeepers are finding out, to their sorrow that it doesn't pay to fool around with old A. F. B. Most of us are soft-hearted when it comes to destroying diseased bees and combs. We in the Root Co. apiaries learned years ago from bitter experience, that **it positively does not pay to temporize with American foulbrood.** In fact, it took us about a dozen years to learn this lesson, but we finally did learn it, and for quite a number of years we have destroyed A. F. B. colonies and combs promptly when found.

And what a glorious feeling we have experienced in realizing that, since adopting this policy, we have not been harboring disease. There is no cloud hanging over us. The bridges are burned behind us, as are the diseased bees and combs.

In the guest editorial appearing on page 297 of the July, 1942, Ameri-

can Bee Journal, L. R. Stewart of Newport, Indiana, hands out some timely advice, where he says, "Disease must not be tolerated; burn on sight. There is nothing in beekeeping that will eat into your profits so rapidly and so surely as disease. Don't experiment in this emergency; use tried and proved methods. Let the Government do the experimenting."

Mr. Stewart is right. Comparatively few beekeepers are qualified or properly equipped to carry on sound experimental work with disease. The various field stations in bee culture under the Department of Agriculture, in charge of James I. Hambleton, Beltsville, Md., are equipped to undertake and carry on scientific research work on disease resistance. This they are doing in a creditable manner. And, incidentally, it has been found that some strains of bees are more resistant to A.F.B. than are others,and some strains have been found to possess a high degree of resistancy. Please bear in mind, however, that even a high degree of resistance does not mean immunity.

The project on resistancy now being undertaken by our scientifically trained workers is a worthy one and should have the support of every beekeeper. The best way to help this project along is to cooperate with apiary inspectors, avoid harboring disease, and leave experimenting on disease to our government men. Our bee inspectors, whether we realize it or not, are doing a splendid piece of work and we should do all possible to make their work easier.

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Intensive vs. Extensive Beekeeping In the face of present conditions, the increasing demand for honey and wax, and advanced prices there may be a tendency to overexpand. However, shortage of labor and rubber will naturally curtail extensive commercial operations.

Present conditions warrant making each and every colony a maximum producer. During the past few years commercial beekeepers have operated apiaries as units in mass production. Such operations under intelligent management may have been justified.

In the old days, before out-yards were common, beekeepers concentrated their efforts on colony manipulation. They knew each colony and its characteristics. They had time to spend on individual colony management.

Unless all colonies are producing the maximum crop the per colony average is lowered and the margin of profit on investment is reduced. Our slogan could well be, "Make every colony produce the maximum crop."

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Limitation Order L-26 Amended When the War Production Board Limitation Order L-26 went into effect January 1 the manufacture of all farm equipment was restricted to a fixed quota based on the calendar year of 1940. At that time bee supplies were granted a quota of 100% of 1940. Shortly after the establishment of this quota the sugar curtailment program was announced and this resulted in a considerably increased demand for honey. In addition to this, beeswax was being consumed in the war effort in greater quantities and the need for adequate pollination of fruit, legumes and other farm produce had become more urgent.

The supply manufacturers in cooperation with James I. Hambleton, Chief of the Bee Culture Laboratory started an effort to have the supply quota increased.

On June 20 an Amendment to Limitation L-26 was announced granting an increase of 33% on the critical material used in bee hive construction. The increase was limited to nails, frame wire, metal rabbets and flat tins. All other items including extractors, tanks, pumps, excluders, smokers and other tools remain under the 100% quota. Unfortunately, the Amendment permitting an increase does not guarantee that critical material can be obtained. Many metal fabricating manufacturers are booked so far in advance with army, navy and lend-lease orders which come first that they are unwilling to make any promise for delivery on domestic purchases.

While the increase comes too late to be of much help this season it will put the industry in a stronger position when new quotas are announced late this fall.

Metal is extremely critical at the present time and as the war progresses it will become more difficult for the industry to obtain. Every effort should be made to repair and conserve the metal equipment needed by the industry.

From North, East, West and South

NORTHERN CALIFORNIA, July 2

Weather: Here in the Bay Region, beekeepers on meeting, congratulated each other on the fine honey weather of June, but it came too late for them for they had finished extracting in May and their honey was in the can. Their average was 40 lbs. to the colony though some beekeepers claimed as much as 150 lbs. to the colony. Commercial beekeepers have all moved out of the county for cotton, bean, afalfa, and star thistle locations. The prospect for a crop in all of these is fair to good for bees that are in the right condition and ready for the flow when it comes.

The spring has been backward and the weather too cool in many places for bees to get out for nectar. The result has been more feeding than usual. There has been a general complaint of too much swarming, and that complaint still continues to come in. However, the general report is that bees are in the best condition for the second crop that they have been in for years. One of our migratory beekeepers wrote in that a week ago he was moving into the mountains when he was caught in a snow storm and had to unload his bees by the side of the highway. He had just finished unloading when the sun came out and in less than two hours from the time he commenced to unload, the bees were coming in loaded with pollen and he found he was in a good location for nectar. This is not an unusual experience in the mountains.

Honey Market: Beekeepers who have honey are not certain as to what prices are. Buyers are around but do not seem anxious to buy.

Beeswax: There is a good market for beeswax at a good price. There has been so much talk in the line of encouraging beekeepers to save wax that a marked effect is shown wherever we go among our beekeepers. They are saving what formerly they wasted.

Miscellaneous: Our beekeepers realize more than ever the importance of organization. Two very important meetings of beekeepers, honey buyers, and packers have been held in Los Angeles and San Francisco the past month. The discussion at both of these meetings centered around the effect of M-118 and GMPR on the present and future markets of honey as well as ways and means of improving the present market for honey. The desirability of a stronger organization of those interested in the honey was discussed at some length, and it was suggested that the honey buyers and packers should become affiliated immediately with the California State Beekeepers' Association so as to lend their advice and financial support to any constructive movement for the betterment of the honey industry in California. In these emergency days, members count more than individuals and the industry should be adequately represented both by members and finances. Honey is receiving unprecedented publicity these days. **Now is the time to act.**—C. W. Hartman, Oakland, Calif.

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SOUTHERN CALIFORNIA, July 1

The weather today is most delightful and had we been blessed with enough rainfall during the winter and spring I dare say we would have nothing to complain of. The month of June passed without rain. We had several foggy mornings, a few clouds at times, warm but no excessive heat and cooling ocean breezes during the day.

Honey Crop: We have little to add to what we have reported in former articles. Many apiaries that remained on their summer locations in the unirrigated parts of Southern California and were not moved to the orange, have colonies that have not gathered enough honey for winter stores.

Prices: Buyers have been paying 11 cents for orange honey and that seems about the going price so far as we have been able to learn.

Beeswax is in demand at around 40 cents per pound.

Miscellaneous: Gleanings arrived June 30th, and as you might guess, the first page we turned to was "From North, East, West and South". Oh,

how we missed the smiling face of our esteemed "Side kick", Cary Hartman. Hope nothing will prevent his being with us again this month. [Due to illness, Mr. Hartman was unable to send in notes for July. We are glad to have him back in this issue.—Ed.]

If we were to suggest or guess just what constituted the most active work of the beekeepers of Southern California during the past month we would say moving bees north, south, and east, but not west. Tens of thousands of colonies have taken a ride, some only a few miles, others hundreds, yes, even thousands. It makes us think of a fellow beekeeper that we have known down through the years who had moved bees during the horse and buggy days and had later gotten a truck. When asked how he liked moving bees he said, "Oh, it is only fun moving bees with a truck."

Beekeepers of Riverside and San Bernardino Counties hold joint meetings occasionally. We talk over current issues with our friends, listen to some wild remarks, such as, "Let the price go sky high, what do I care!" and hear some good sound talks by representatives from our state Agricultural College at Davis or from our State Inspector from Sacramento and usually come away feeling wiser if not wealthier for the time spent. How well we remember only a few short years ago when one fellow, standing practically alone, argued in favor of moving bees without closing the entrances. Today the custom is almost universal. How things do change!

The picture, so far as honey is concerned, does not improve as time goes on. Many beekeepers who moved to the orange, having no choice, have moved back to their summer locations hoping for a little honey to help with the wintering problem. Others we have heard of have moved to the alfalfa, this to be followed with a move to the cotton and possibly thistle later in the summer. Some have moved to Utah, Idaho, or even Nebraska, Iowa, or Minnesota. White sage, often one of our best June blooming honey plants, made a scanty growth this year and failed to furnish nectar of any consequence. Wild buckwheat, one of the best if not the best, summer honey plants, shows thousands of acres of white blossoms with nothing doing so far as honey is concerned.—L. L. Andrews, Corona, California.

TEXAS, July 1

The weather over much of Texas for June was normal.

The honey crop of most of southern Texas has been taken. Early flows from guajillo, catsclaw, and other shrubs together with a fine flow from mesquite, all of which ended about May 1 represents the crop of the year. Various yields ranging from 30 to 75 pounds per colony have been taken from a considerable number of apiaries. Horsemint which promised a large flow gave little or no yield. The weather turned hot and dry just as this widely distributed honey plant came into bloom, which resulted in no honey flow. In many sections where pecan, oak, or hickory trees exist in quantity heavy flows of honeydew have been stored by the bees. In some localities hardly known to the beekeeper the few farmers who have bees are rejoicing over the honeydew flow secured this spring. As one farmer expressed himself: "It is all round better than corn syrup or sorghum molasses." The failure of the horsemint does not mean that the bees are suffering. It is to be remembered that there are five to six hundred plants that bloom the first part of the year, all of which contribute a little for the bees.

Condition of Bees: Of the many colonies of bees upon which reports are at hand, it is evident that bees are in better than normal condition for this time of year. Most of them have entirely too much brood for their own good. This is due to the fact that the cold of early spring did not allow the queens to commence egg laying early. While cotton is being dusted in many places very little complaint has yet been received as to the loss of bees. Such complaints are sure to come, however, just as soon as the cotton raisers commence to dust in northeast Texas.

Miscellaneous: Due to the great demand for honey and beeswax, numerous people are making the attempt to enter beekeeping. While it is not possible to obtain any income from beekeeping commenced this late in the year if beekeeping is to be entered as a serious matter and not as a speculation this is the time to commence. Between now and September bees can be purchased as

cheaply as at any time in the year and the operator can start improving the condition of his colonies and making full preparations for beekeeping next spring. Due to price control everyone who considers the increase of his number of hives or is entering into beekeeping should consult dealers in beekeeping equipment. —H. B. Parks, San Antonio, Texas.

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LOUISIANA, June 27

Weather conditions have been generally unfavorable. Too much rain has restricted flying over the most abundant crop of nectar-bearing flora which we have had in recent years. Brood chamber congestion brought on swarming in yards run for honey and, what might have been a bumper year, now looks like one of average production.

Markets are about as usual. Slight advances in wholesale prices are not reflected in the retail markets and small packages are being sold at their usual price. Producer-bottlers seem to be absorbing small advances in costs on cans and glass. Roadside stands and mail order distributors have made sharp advances in prices asked for 10-lb. pails but few of them seem to be reaping any great business harvest.

Miscellaneous: Beekeeping is an exciting business; its economic importance is far ahead of its actual monetary value, so, we have plenty of time in which to "breed" experts and psuedo-philosophers who offer some wonderful schemes of impracticable practices which seem calculated to convince the small operator that his efforts are in vain — even mildly criminal. Dr. Phillips has expressed his doubts and condemnation of the elaborate filtering of honey and has even questioned the propriety of calling this manipulated product "pure honey", but we are periodically advised to install this machinery to satisfy consumer demand—which same has never been encountered by this writer except in bee journal articles. It seems to be as reasonable that we should "demand" that no farmer offer potatoes for sale until they were "French fried".

Aside from this, 1942 has offered plenty of excitement. First came M-118 and sugar rationing; the wild rush to lay in large stocks of honey by bottlers and ice cream manufacturers created a temporary "harvest" for the producers—then came the restrictive "use orders" which "busted" this income bubble. Now we are being regaled with modifications which establish loopholes for various speculative manipulations and most of us are looking around for an opening through which we could squeeze some money-making scheme of our own.

Do you remember as far back as 1919 and 1920 when rice went up to 18 and 20 dollars a sack of rough rice? Do you also recall how doctors, merchants, and many others went wild and started to grow rice and share in the profits? And do you also remember how they **ALL** went broke when the market broke? Well, the same thing seems to be happening again and sugar brokers, coffee roasters, and canners of vegetables are going into the honey-bottling game—to get rich quick. They will probably hurt some of our regular big packers and ruin some of us little fellows—but most of them will be glad to get back to their regular business after a bit of "experience". —Geo. W. Bohne, Luling, La.

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IOWA, July 7.

Weather: General conditions have continued through late spring and early summer as unfavorable for a maximum crop of honey. The rains of the spring period have carried far over into the summer with the result that much of the bloom from which bees gather honey was lost because of inability of the bees to reach the bloom. Conditions during July have improved slightly in favor of the bees. In general, it can be said that the colony population was fully as good as could be expected under the conditions of build-up. The amount of bloom which was present was almost equal to that of any of the banner years. However, the weather kept the bees in the hive and they could not get to this bloom to bring honey into the hive. This has resulted in the necessity for a slight shift in management of supers and even frames in supers. It has been difficult to get foundation accepted in the supers. Beekeepers are hopful that nature may yet com-

pensate and that more than the usual amount may be obtained during late summer and early fall.

Market: There is considerable confusion relative to the price of honey. Producers in general are not familiar with all of the conditions which might influence honey prices. The source of their information is not always unbiased. There will probably be more producers interested in marketing their own product than has been the case for several years. It will be possible to do this in view of the widespread local demand for honey. Such producers should be fully aware of the requirements for marketing honey to the producer. It means careful preparation, packaging, and recognition of the price structure.

Miscellaneous: A campaign is being conducted by the Extension Service to encourage late summer requeening. The reasons for this are three: (1) Spring requeening was not successful; (2) an unusual amount of supersedure has occurred; and (3) it seems advisable to put into winter more colonies in better condition than ever before so as not to be so entirely dependent on package bees for correcting deficiencies in the season of 1943.

Fall requeening has been quite satisfactorily practiced and should not be difficult if simple rules are followed.

Unusual interest has been manifested during this season in counties to cooperate with the Inspection Service on area clean-up program. The number of counties cooperating has increased 50 percent over any previous year and the local appropriations made available have been increased 66 percent. It has been necessary to employ additional temporary help by the Inspection Service in order to meet this situation. This demand on the part of local groups is a healthy situation and it is hoped that more local groups may avail themselves of the opportunity which is afforded by the law to inaugurate a clean-up campaign in their county.

It is well for beekeepers to take full advantage of the present trend for increased use of honey. It is an opportunity to enlarge the scope of users so that some of them may be permanent customers. One should assume that it is wise to take any advantage of the present situation for there are plenty of competing items on the market and surely competition will be keen in years to come. However, beekeepers must not lose sight of the fact that bees are recognized as of much more value in their service of pollination than in the product of honey which is available for human consumption. Beekeepers have been fortunate that their industry has received this overall support by authorities in Washington and it is necessary to continue to merit the support which has been received.—Prof. F. B. Paddock, Ames, Iowa.

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SOUTH DAKOTA, July 8

Weather: We have plenty of rainy with cold and cloudy weather. But the heat has been turned on intermittently the last few days resulting in first-class honey weather.

Crop Outlook: The soil is pretty well saturated with moisture and there is about an average acreage in clover so the prospects for a well sustained flow look good. The bees are pouring it into the supers now, but I believe many colonies are not up to normal strength due to an unusual amount of swarming earlier. Swarming was aggravated by the cool rainy weather during May and June which kept bees loitering in the hives and beekeepers swarming and sweating because dirt roads were often impassable quagmires. Moreover it is difficult to work bees when the weather is against you so the spring work in yards was behind schedule in many cases.

Some colonies were lost by starvation in May when beekeepers were unable to get to the yards or were unable to obtain sugar in time. For the most part colonies are in excellent condition and we may look for some record-busting individual yields by fall.

Honey Market: People are continually asking for honey but there is little, if any, to be had. I put away a can and a half for ourselves, but the stock is now down to 35 pounds due to my inability to use anything but passive resistance to friends and and neighbors in distress for sweets. If the stock doesn't last us I'll be one sorry sinner for beef, bread, and honey are the three things I don't get tired of.—J. F. Norgren, Junius, S. D.

MAINE, June 27

Weather has been favorable on the whole and nectar-secreting plants wintered well. Forest bloom and willow gave a good start. Had colonies been strong and well cared for this would have been an extra good season, I feel sure, though four weeks of the best of the clover flow is ahead. [This was received June 29.—Ed.] Weather has been generally cool with one hot week. In spite of this, nectar has come in well. My reports from Central Maine are too limited to make a fair report.

Bees in this area wintered badly and my losses were the heaviest for many years. Colonies badly weakened were able to build up and were ready for a super the last of June. Stronger colonies started swarming June tenth, supersedure being the prime cause of these first swarms. Supers not going on sooner have played a part.

Conditions: There will be a good demand for all the honey we can secure this year. I feel it will be a mistake to advance prices too much. It is a big temptation to do this when producers are being charged out of reason for much they have to buy. It will be an opportune time to introduce honey to homes where but little has been used.

I think that in Northern Maine not more than 75% of the colonies are ready for the clover harvest. In my own yard not more than 60% are ready for it. In spite of a popular belief in let-alone beekeeping, bees don't take care of themselves and produce the best results for their owners.

Miscellaneous: I find it a bit difficult to write interesting notes when most of my information must come to me second-hand. For the first time in fifty years I have been unable to be with the bees. Two sons with more work of their own than they can well do are trying to learn the ways of bees and comb-honey production. I have been confined to my bed much of the time and any help I could give has been by remote control. Still I am thankful. Without the help of my sons mine would have been a total loss.—O. B. Griffin, Caribou, Maine.

COLORADO, July 6.

Weather: The spring was persistently cold and backward until "Old Sol" on May 26 decided to take a hand in the matter and sent the mercury up to 96 degrees breaking her own record for that month for the past 54 years. This abnormally warm spell was of short duration and agreeable temperatures have been dominant since.

More moisture has fallen during the past six months than is normally precipitated in a whole year. San Luis Valley, however, is at the present in need of rain for best secretion of nectar. In the last part of June extensive hail storms widely distributed have done much damage to bee pasture.

Conditions: In general there has been a much heavier winter loss of bees than usual. Scant stores of poor quality coupled with continued cold weather last winter are to blame for this loss. Surviving colonies, greatly reduced in strength, are recuperating and will be in fair shape to take advantage of the sweet clover which is beginning to yield. No nectar was stored from the first cutting of the alfalfa as it did not bloom normally, and consequently there was no swarming.

The old crop of honey is well cleaned up and the trade is ready for the new honey as soon as it is ready.

Miscellaneous: After several years of suspension the apiary department at the Colorado State Fair, August 24 to 28 inclusive, is scheduled to be re-established. Beekeepers are welcoming this exhibit and plan to take active part in competing for prizes. Prospective exhibitors should write to the manager of the fair at Pueblo or contact their county agent for information.—G. A. Pauli, Pueblo, Colo.

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ONTARIO, July 4.

Weather: At 10 A. M. today the thermometer says 60 degrees above freezing. Prospects are none too good for a flow from clover. With the exception of ten days or so, this condition has prevailed quite generally in this part of Ontario ever since my notes of a month ago. Our extremely early season as indicated by the unusually warm weather of April, has now changed

to one later than usual, and here in York County, the first nectar from clover did not come in until June 21st. In Wentworth Co. southwest of Lake Ontario, the flow started a week earlier.

Moisture conditions are fair in most localities in Ontario we understand, although some sections need rain. One of these places is in Victoria Co. where a lot of buckwheat is raised and at present the ground is so dry that the farmers cannot get the crop in owing to difficulty in working the land.

Conditions: To date there has been little honey stored in apiaries near our home, but near the Toronto city limits where we have some bees, they have done much better. Possibly much of this difference in storing is accounted for by the difference in conditions of the bees. The epidemic of supersedure, mentioned from so many sources in July Gleanings, certainly has been in evidence here. A beekeeping friend calling at our home, stated that this fall every colony of bees will either have a young queen or be queenless, and that pretty well describes the situation. We positively know that some of our apiaries have superseded well over 50%, and we are quite sure that many of the balance have raised young queens that we have not seen yet. As all our queens are clipped every spring, this statement is not based on guess work. Of course, that means that hundreds of colonies are not nearly so strong as they were a month ago. We attended a meeting at Guelph lately and many commercial beekeepers were there. Speaking to a large number of these beekeepers, every one said that their bees were ready for the flow a month too soon, and that during the month or more of bad weather during fruit bloom and up to the middle of June, the field bees wore themselves out in a vain search for nectar, and stores were about all consumed in feeding so much brood and so many bees raised in late April and early May. And the worst feature of this too early stimulation was that queens were worn out and then this wholesale supersedure followed just at a time when the flow was starting.

One apiary of 60 colonies seems to have held up better than the present and are more even at present in strength. This apiary was wintered in single-story hives made very heavy last fall. They did not breed up so rapidly in April, stores were saved and vitality of bees conserved. At any rate that is our explanation, and we still believe that a colony reaches its peak at a certain time and then gradually recedes for the season. This does not mean that the queen is necessarily failing and this same colony may act just the same way the following spring. Those who wish to stimulate their colonies early in the spring to have them extremely strong in April or early May, are at liberty to do so, but we will still prefer to try to have colonies at peak strength just when our main flow starts.

Prospects: As to prospects for a crop of honey, beekeepers are guessing as to the outcome. So many colonies knocked out of condition, by so much supersedure, will reduce the crop from what it might have been, even if we get a good flow of honey for the next two weeks. Clover is not plentiful in many districts but basswood trees are showing up good. Our own apiaries show spotted results to date—some have stored quite a lot while others only a few miles away have done little.

Miscellaneous: At the Guelph meeting already referred to, a proposed order was submitted to the beekeepers asking their approval to a plan to regulate the sale of honey to manufacturers. The meeting endorsed the principles of the order and while we expect the Government will pass this proposed regulation; to date we have not had any further word. This proposed regulation requires all industrial users of honey to get a permit from the Food Control Board before they can buy any. Much power is given to this Board and I presume the quantity of honey available for industrial uses will largely be decided upon by the volume of honey available. While some beekeepers hardly knew what action to take regarding this proposed order, most of those present felt that the long view should be considered rather than to get a big price for this year's honey and curtail most of domestic consumption, not to mention the export trade which is pegged in so far as price is concerned. Naturally when the war is over and sugar is freely available again, all these industrial users of honey during war times, would at once go back to sugar which is cheaper and in some cases preferable for their purpose.—J. L. Byer, Markham, Ontario.

Dr. E. J. Dyce Succeeds Geo. H. Rea

George H. Rea

Dr. E. J. Dyce

It has been known for some time that Geo. H. Rea, the bee extension man of Cornell University, was about to retire, and his resignation has now been officially announced, also that Dr. E. J. Dyce will take his place.

Of George Rea it may be said that no man connected with beekeeping in the last 30 years has had a wider range of experience and training in the field, either as an instructor or as a honey producer on his own than he. George has kept bees in Pennsylvania, was state apiarist and bee inspector for that state, has kept bees in New Mexico, encountering the smelter fumes of the great West, managed bees in Ohio, became bee extension man under Phillips in New York, a position which he has filled so well for the last eleven years.

As a state bee inspector for Pennsylvania he was popular, knew how to handle and get the goodwill of obstreperous beekeepers who, in one case, threatened to use a pitchfork or a shotgun on the first state man who would dare to show up. George soon, by his smile and his tact, changed the belligerent into a friend who asked him to come back again; and so everywhere George went he carried sunshine. In short, he has made good in any job he has ever undertaken.

It has been said of him that he was the best extension man in the States.

As a speaker before large audiences Mr. Rea has few equals. He has a fine carrying voice, a beaming smile, as he speaks, and an indescribable personality that maks one love him. Beekeepers of Pennsylvania, Ohio, New York, and everywhere will long remember him as he showed them in their own apiaries how to keep bees better.

He now goes back to his old home where he reared a family and where now he will put into practice the knowledge he has gained in keeping bees, and, last but not least, regain his health.

Dr. E. J. Dyce, a former student of Dr. Phillips', and originator of the process of pasteurizing and finely crystallizing honey which bears his name, manager of the Finger Lakes Honey Producers' Cooperative in the Empire State described in our last issue, now takes Mr. Rea's place. Dr. Dyce is a much younger man, of course, and has many if not all of the fine personalities of Mr. Rea. His scientific training, his experience in cooperative marketing, will enable him to take up the work Mr. Rea did so well, and at the same time give a boost to the bee and honey business of New York State.

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Asked and Answered

A Swarm Control Measure

Question.—How can I control swarming when producing extracted honey over double brood chamber colonies?—Ovid Funks, Wisconsin.

Answer.—One way to control swarming is to give the bees plenty of comb space which means putting on supers in ample time, just a little in advance of the time they are actually needed. As you are operating each colony in a double brood chamber it is a good idea, when cells are found, to put the queen down into the lower brood chamber, under an excluder and raise the top brood chamber to the top of the pile of supers, being sure to cut all queen cells in both brood chambers. The queen cells will likely be found in the upper brood chamber. This manipulation spreads the brood and relieves congestion which is said to be the prime cause of swarming. Cutting queen cells every ten days does not necessarily prevent swarming. However, manipulating the brood chamber so as to relieve congestion does tend to control swarming.

Removing Rust From Extractor

Question.—How can I remove the rust from the baskets of a two-frame extractor? I scoured all I could but there is still some left in crevices and corners. I am afraid this will discolor the honey.—Theodore J. Kasper, Wisconsin.

Answer.—It is difficult to buy aluminum paint right now but if you can get the powdered aluminum and use a good varnish as a vehicle, you can paint these rusted spots and cover them up completely. In lieu of varnish if some other liquid made especially for applying to metal is used, you will be all right. If you cannot get the aluminum powder or the proper paint using the powder, use a good varnish on the metal and we think you will find you will be perfectly safe. At the same time, there is nothing about rust of iron or steel that is harmful and if you clean the parts well before you begin extracting, there is not likely to be any of the rust found in the honey, for the honey itself is a rust preventive. Rust ordinarily takes place after use and after the extractor has been cleaned out. A good many paint the parts after washing and drying, with hot paraffin. This does not stay on indefinitely but prevents further rusting.

Moving Full Colonies A Few Miles

Question.—Can strong hives of bees be moved a short distance by truck, during the summer months in this locality?—A. J. Lines, Indiana.

Answer.—Yes, it is possible to move full colonies of bees at this time of the year, provided the moving is done late in the evening, after all of the bees have returned from the fields to their hives. It is preferable to move bees during the night without using entrance or top screens. Be sure bottom boards, covers, and hive bodies are fastened together securely. Simply smoke the entrances of the hives thoroughly before loading the hives of bees onto a truck, then drive to destination immediately and place hives on their new permanent stands. The following morning the bees will become oriented. It is well to leave at least six feet of space between the hives to facilitate easy manipulation of the colonies, also to avoid having bees drift from one hive to another.

Getting Bees From Siding of Building

Question.—A neighbor has a very large colony in his house between the siding and lath. It has been there I think about a year. We could have the bees if we could get them out. How should I do it?—Willis Gassman, Ohio.

Answer.—The easiest way is to remove some of the siding of the building; but if this is impractical, a device known as the bee-escape may be placed over the opening or entrance leading to the bees. The bee-escape allows the bees to pass out, but will prevent them from returning. If a hive containing comb is arranged close to the opening on the outside, practically all the bees may be secured in this way, except the queen. If brood is at hand, it would be an advantage to put a little unsealed brood with enough bees to cover it in the hive. These bees will probably raise themselves a queen from the brood given them, but it would be much better to introduce a laying queen. In the course of about six weeks most of the bees will be in the new hive. There will be some brood and the queen left in wall of the building. These may be killed by putting Cyanogas in the nozzle of a bee smoker and blowing it into the opening leading to the bees. After a few days the bee-escape may be removed and the bees in the hive allowed to rob out the honey within the enclosure.

After all the bees and the honey are in the new hive, it can be removed; and, if taken away, it should be located a mile and a half, or, better, two miles away. Should the hive be moved only a short distance, most of the bees will return to the old location and re-enter the enclosure. If it is not practical to move the bees a distance away, the hive may be moved a few feet, two or three times a week, until it is the desired distance from the enclosure. If moved too great a distance at one time, the bees will invariably go back to their old location. After the bees are out of the enclosure, the hole should be covered with a piece of tin.

When To Take Off Honey

Question.—Is the following practice of mine good? I take off a super of honey as it is ready, and usually before much of it is capped, extract it, and return the empty comb the same day.—Rufus P. Robbins, Florida.

Answer.—If you extract the honey before the combs are sealed at least two-thirds or three-fourths we fear you will have difficulty because of fermentation. There are occasional exceptions to this in extremely dry locations, but as a rule the honey is too thin if the combs are not at least two-thirds capped. Putting the extracted combs back on the hives the same day is all right. In out-apiaries this is seldom possible although other combs that have been extracted can be put on at the same time full combs are taken off, if desired.

Bees Visit Bird Bath

Question.—My neighbor's backyard, about 150 to 200 feet from mine, has bird baths where my bees collect. I put pans of water in front of the hives, but this seems to do no good. They still go to the water in his yard. His main kick is that the birds don't come to his place. Is there any way possible I can keep my bees watered at home?—Stewart Pattison, Ohio.

Answer.—It is somewhat difficult to induce bees to change their habits with reference to visiting a place to secure water, after these habits have been established early in the season. You might try making the watering place near the hives somewhat more attractive, as suggested in your letter. A little carbolic acid sprinkled near the bird bath might prove to be effective, as bees do not like the acid. Possibly the neighbor would object to this procedure. Perhaps if you supply this neighbor with some printed matter on bees and their value as pollinators it might elicit his interest in beekeeping. Then, too, a little honey, when available, given at an appropriate time helps to keep such a neighbor sweet and may, incidentally, cover a multitude of sins on the part of the bees.

Copper Honey Tank

Question.—Can a pure copper tank be used for settling 145° F. warmed honey? Can it be used for a storage tank? What effect would the small amount of acid have on copper?—Chas. Zimmerli, Mo.

Answer.—Pure copper, unless it is tinned, is not considered a good material for a honey tank, at least, for a tank in which honey must stand for a considerable length of time. A short exposure to copper does no harm but inasmuch as honey has a slight acid reaction, bare copper is not considered advisable. Heavily tinned copper, if the tin does not get scratched, is all right. In saying this, we have never heard of anyone made ill by eating honey stored for a long time in copper, nor have we ever heard of any honey that showed any reaction to a test for copper, and yet, since honey frequently has a slight action on copper and since most copper salts are to be avoided, we always recommend that if copper is used that it be heavily tinned.

Laying Workers And Drone Laying Queens

Question.—How can I tell the difference between a case of laying workers and a drone-laying queen?—B. L. Von Jarchow, Wisconsin.

Answer.—It is a little difficult, at times, to differentiate between a case of laying workers and a drone-laying queen. Even experts or experienced beekeepers, so called, may get mixed up on this matter. Laying workers begin to lay unfertile eggs, usually in worker cells, after the colony has been queenless for a time. The drone larvae as they develop, protrude somewhat beyond worker cells and therefore the capped drone brood has an unnatural appearance. The drones thus produced are likely to be somewhat under sized, because of being reared in worker cells. On the other hand, a drone laying queen will usually lay unfertile eggs in drone cells and the bees will sometimes build more drone cells, apparently to acommodate the queen. In some instances the bees will alter the midrib of the comb, that is, they will change the base of the cells, from worker to drone, in order to have drone cells available for the queen.

Spinster Jane Says

With the exception of about four really hot days, our summer has been exceptionally cool, with all too plenty rain, and daily high winds. The menfolk, busily haying, find it hard to even coil hay, some days, and utterly impossible to draw in, the wind carrying away the forkfuls being pitched upon the load.

Due to so much rain, weeds have their big chance to thrive, and our big garden, this year planted on quack-infested ground, is proving quite a problem to keep weed-free. In fact, the quack is ganging up on us, calling for that strong arm method of eradication, constant hoeing. Radishes of a few weeks sowing, are becoming turnip-like in size, though retaining their crispness and flavor.

Alsike clover abounds in every field and pasture, even where it hasn't been sown in years. Is it like alfalfa seed, in that unless scarified before being sown it is slow to germinate? This, too, seems to be the case with sweet clover. It may one year be almost entirely absent, and the next year flourish. Our roadsides, once like miniature forests of sweet clover growth, were entirely free from it, and this year it is coming again.

How the bees are working these sunshiny days! As I go to barn or hen-house they zoom in hundreds over my head, on their way to garner in nectar, too busy to stop to argue with me over getting in their way when one becomes entangled in my hair. Their one thought is storing up plenty of food, just as we womenfolk thing of filling our empty sealers with fruit to fill the empty shelves in our cellars—but how much more pep and enthusiasm they have in their work. They surely put us to shame. We dread a hard task, hang back, or go at it half-heartedly. Bees never do that unless their queen is useless, or when sometimes they have a worker-queen, laying only drone-eggs. And there is a thought! So much depends upon the queen in our home. If she is a hustler, one of those wise women of whom Solomon speaks "Who eats not the bread of idleness—who looketh well to the ways of her household,"—well, her children will have been brought up to work and to have an enthusiasm in their work. On the other hand, if the queen of the home is an idle dreamer, her children, uncared for, left to look after themselves and run the streets, well, what enthusiasm will they have in work when it is forced upon them? So much depends upon the queen in a hive, and upon the queen in the home, if we look for thriftiness and content.

In the awful war going on, which we still think of as "over there", we cannot help wondering why the big delay in taking the offensive. It may be sparing lives now, but what of the awful loss of life that must come if we fail to act when so sorely needed!

Bees always take the offensive, whether strong or weak. They never once hesitate, even against a superior force. Even the few in a hive being robbed attack instead of retreating, fighting to the death.

As I watch the bees zooming overhead, I am glad they are friendly, home bees, not hordes of attacking Japs, and who knows how soon such may come. Distance is our biggest safe-guard, in spite of our Allied Navy and the willingness of our soldiers to take the offensive.

Because we were honey-hungry and because our neighbors were crying for fresh honey, Boy took off a few frames, here and there in strong hives, selecting those best capped, and did a little extracting. He was on what they call his "long change", having three days off work before going on his next shift. The fresh honey provides a wonderful treat, and is doubly welcome because of sugar rationing, giving us a sweet of the very best kind. With an allowance of one-half pound per person per week, not many pies and cakes can be made. We will be the better for this I am sure. We will eat more fresh fruits and honey and less rich pastry. When the men, mostly with sweet-tooth propensities, clamor for other sweets, buying a few cakes will help out, but with honey this should not be necessary.

In baking with honey, all recipes do not suit all tastes. We are constituted differently. To me, mushrooms when fresh are delicious. To

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Talks to Beekeepers

By M. J. Deyell

The Beekeeper's New Year

Successful beekeeping is largely a matter of planning ahead intelligently, then carrying out the plans. It seems natural to have a certain time of the year to take a look ahead, and that is what we are going to do right now.

August 1st has been called the beekeeper's new year. This would hardly apply on the other side of the world, as for example, Australia or New Zealand, because their beekeepers' new year would come in February.

A 100-super truck ready for its load of honey.

And why August 1st? Because, at this season of the year we should start to prepare colonies for winter so that they may go through the winter successfully. Generally speaking, populous colonies in the fall well supplied with stores and given adequate protection where winters are severe will be populous colonies in the spring and those good, strong colonies, boiling over with bees are usually the ones that put up the surplus honey. Surplus honey is, or should be, the beekeeper's main objective.

One man remains on the truck to pile up supers carried by the two men on the ground.

How can we develope strong colonies to go into winter quarters? There are three essential requirements. First, **good queens;** second, **ample comb space** for brood-rearing and for the storage of in coming nectar; and, third, **an adequate amount of stores,** which means honey and pollen.

Note the load of 100 filled supers with tarpaulin over the top to protect the honey from dust and possible rain.

Queens

During early August all inferior queens should be removed and replaced with young, laying queens from a good strain of bees. Inferior queens usually lay irregularly or scattered instead of depositing eggs in solid areas of the combs. An inferior queen can sometimes be de-

Loaded truck in an apiary ready to leave for the central extracting plant.

A comb of white honey being uncapped by a power uncapping knife, which makes 750 r.p.m.

tected by the manner in which she walks over the combs. A good queen usually moves steadily, laying eggs from time to time, even as the owner watches her. An inferior queen may run about nervously and as a rule she does not have the robust, healthy appearance that a good queen has. A poor queen may have a greasy and wobbly appearance, especially if she has reached the end of her usefulness.

Occasionally, a queen may lay an abnormally high percentage of unfertile eggs, which, of course, become drones. Such a queen should not be tolerated. A drone-laying queen which apparently is the result of partial insemination may look much the same as a normal queen and about the only way to detect the difference between the two is to examine the brood.

Comb Space

In some regions there is a heavy fall flow. A few beekeepers may fail to put on supers for the storage of the fall honey and consequently the brood chambers become plugged with honey and the queens are restricted in their egg laying, and swarming may occur. If a queen is not able to lay eggs normally during the fall months, she cannot produce a populous colony of bees to go into winter quarters. And so, ample comb space should be provided during the later summer and fall months, especially where a fall flow is likely to occur.

Stores

Quite a number of beekeepers are now using the food-chamber hive. Such a hive means wintering each colony in a two-story hive. The upper super, usually called the food chamber, may consist of a shallow extracting super, or a standard sized super. The larger super or food chamber seems preferable, considering dearths of nectar that may occur in the spring or early summer, in some regions. It pays also to have the upper brood chamber, or food chamber, crammed full of honey, late in the fall in addition to what honey may be in the lower chamber, so that each colony may have an abundance of stores.

The winter cluster of bees in a two-story hive well supplied with honey usually occurs above the entrance of the hive, the center of the cluster occupying the space between the two sets of combs. This space between the two sets of combs gives the cluster a chance to move laterally or sidewise, if necessary. Furthermore, the big slabs of honey above the bees furnish ample stores and a colony thus provided with an abundance of honey is not likely to starve during the witner. Then, too, the cluster moves upward, slowly, as the honey in the combs is consumed. A deep super used as a food chamber has deeper combs and more honey than a shallow super has and, consequently, the bees occupying a hive with a deep food chamber are not likely to run out of stores so quickly as a colony in a shallow food chamber hive.

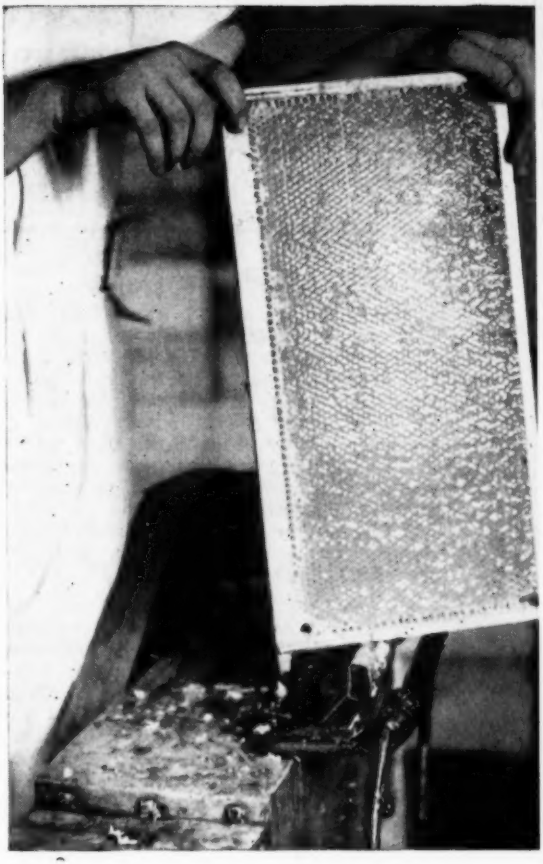
It is possible, of course, to winter bees in single-story hives. Combs of honey may be given in exchange for empty combs late in the fall. Feeding may be done in the spring when necessary. However, this means a lot of extra work and time and a possible loss of bees. Inasmuch as a colony in the spring usually needs

the combs in two supers for building up to honey-gathering strength, it would seem to be much more economical, from the standpoint of a saving in labor, to give each colony a food chamber with an abundance of stores in the fall, in order to help insure successful wintering, also to avoid unnecessary labor in the spring. The combs of honey in the food chamber gradually become available for brood-rearing as the honey is consumed.

And so, let us remember the beekeeper's new year by supplying colonies with **good queens,** when needed, **ample comb space,** and **an abundance of stores,** so that we may have populous colonies next spring that will store the maximum crop of honey which is needed during these days, **to help win the war.**

Hauling Supers of Honey from Outyards

August is the month when considerable honey is extracted in the North. It pays to be well equipped for hauling filled supers from outapiaries. Supers, after being freed of bees, should be loaded on the truck and gotten away quickly before the bees have a chance to start robbing. The tarpaulin shown on top of the loaded supers in the accompanying picture is rolled over the piles of supers as they are loaded.



White honey in virgin comb that has just had cappings shaved off with a power uncapping knife.

Our men wear white coveralls in the apiaries. These suits protect them from stings and the color does not antagonize the bees.

It is a distinct advantage, when arranging hives in apiaries to leave a space between the middle rows of the hives for a truck, so that supers may be loaded from either side. This saves time and steps.

Most back-lot beekeepers would not have occasion to use power uncapping knives but the majority of commercial men do use them. The picture shows how nicely they work.

Don't Remove Surplus Honey from Hives too Early Before it is Well Ripened

There may be a tendency this year, when honey is scarce, to remove it from the hives before it is properly cured or ripened. Such would surely invite trouble. Well ripened honey should contain less than 18% moisture although the government grading rules tolerate at least 18.6% moisture, which honey will weigh 11¾ pounds to the gallon.

Honey with an abnormally high degree of moisture is likely to ferment soon after being extracted especially if it is stored in a warm room. Honey should be stored in a room of moderate temperature.

During a wet season it is difficult for bees to ripen honey, which is done by fanning their wings in order to drive off excess moisture. It is interesting to stand beside a strong colony of bees late in the evening, following a good honey day and listen to the hum of wings within the hive.

Combs of honey should not be uncapped until they are at least three-quarters capped over and even then the honey may not be properly ripened, especially during a wet season. When the weather is dry and hot honey is more easily ripened by the bees.

Just News

The Middlesex County Beekeepers' Association will gather on Saturday, August 29, at 2 P.M. at the home apiary of Mr. and Mrs. Frank O. Nelson, 179 Woburn St., Lexington, Massachusetts. An old-time beekeeper will speak on "Fifty Years Among the Silver Wings". Each family will bring its own basket picnic supper with cups, spoons, and plates for the ice cream, which is supplied from the club funds. Hives will be opened and any beginners' questions answered—A. M. Southwick, President.

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J. Alex Munro, of the Department of Entomology of the North Dakota Agricultural College at Fargo, has been on a leave of absence during the past year while completing work for his doctor's degree which he received recently from the New York State College of Agriculture at Ithaca, N. Y. Dr. Munro has now returned to Fargo to continue his former work there.

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The annual Vermont Beekeepers' Meeting will be held August 22, Saturday, at the extracting plant and residence of F. D. Manchester, Cornwall, Vermont, four miles south of Middlebury on Route 30. In the afternoon a meeting will be held at the extracting plant of Charles Mraz in the village of Middlebury. The meeting will start at 10 a. m. war time, at the residence of F. D. Manchester. This meeting will be of special interest to beginners. For those who travel by bus or train, a car will meet them at the station at Middlebury. Everyone who can come is invited to attend. Prizes of queen bees will be awarded as in the past. Remember to bring the family and lunches.—Charles Mraz, Sec., Vt. Beekeepers' Association.

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Ohio-Michigan Summer Meeting —The two-day meeting scheduled on August 6th and 7th at the factory of The A. I. Root Company, Medina, Ohio will be "crammed full" of educational talks, entertainment, and social activities. The program for August 6th will be built largely around the small beekeepers' problems, while the second day will cover National War Aspects of the industry. Leading beekeepers from Michigan and Ohio as well as many other beekeeping authorities will be scheduled to assure a "bang up" program for all. Don't forget the BEEKEEPER'S BANQUET scheduled on the evening of the first day, as this will be one of the "high-lights" of the meeting—W. E. Dunham, Secretary.

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There have been rumors to the effect that beekeepers would not be able to get comb foundation next year. We wrote to James I. Hambleton, who replies:

I am not greatly worried that beekeepers will not be able to get foundation next year. We have heard no rumblings to that effect and it seems to me that in view of the many occasions upon which the War Production Board has in a material way recognized the great value of bees for pollination, it is not going to do anything to prevent the beekeeping industry from carrying on to the fullest extent during the war and, consequently, that it would hardly deny the industry its full quota of beeswax, particularly since the industry is the original source of domestic beeswax.

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The annual meeting and outdoor picnic of the Kansas State Beekeepers' Association will be held at the City Park at Iola, Kansas, on Sunday, August 9. Bring your basket and also your friends. A good program is being prepared.—O. A. Keene, Pres.

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Pennsylvania State Beekeepers' Picnic and Field Day will be held on August 15, at Valley Forge Park, on State Highways 363 and 23, Montgomery County. The program is as follows:

Morning, 9:30-12:00

Presiding—Prof. E. B. Everitt, Allentown
Registration and Acquaintance Hour—9:30 10:30
Address of Welcome—Paul G. Cummins, President of Montgomery County Assn.
Response
Apiary Location and Management—Robert S. Filmer, Associate Entomologist, Agricultural Experiment Station, New Jersey
Topic—M. J. Deyell, Editor, Gleanings in Bee Culture Medina, Ohio.
History of Valley Forge—Speaker will be supplied by Montgomery Co. Assn.
Some Timely Remarks—Edwin J. Anderson, Extension Apiarist, State College
Greetings from Visitors.
Basket Lunch 12:00-1:30
Light refreshments will be supplied by Mont. Co. Assn.

Afternoon, 1:30-3:30

E. J. Anderson, Extension Apiarist, State College, will have charge of the games and contests. The prizes awarded winners are the contributions from supply dealers and manufacturers, advertisers in the Pennsylvania Beekeeper.

After the recreation there will be opportunity for sight-seeing in the Park.

Honey Cooking Contest—Miss Ethel M. Beadles, Home Economics Director of Montgomery County.

Bring your bee smoker. Bring the whole family, your lunch, and your friends. The afternoon will be given over to recreation and fun. There may be a ball game for those who do not go sightseeing.

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The Empire State Honey Producers' Association will meet at Syracuse, N. Y., in Elmwood Park on Saturday, August 15. The meeting will not only give New York beekeepers a chance to renew old acquaintances but also to learn of and discuss special problems arising out of the war situation. The afternoon program has been planned devoting the most of the time to a review and discussion of the Government "General Preference Order" and "General Maximum Price Regulation". More time than usual will be devoted to these problems. The meeting place has been placed in the central part of the state for the convenience of all. Come, bring a picnic lunch and have a real good time.—B. L. Lane, Pres.

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The meeting of the Western Iowa Beekeepers' Association, held at Harlan, on July 15, was well attended, there being about 200 present, in spite of the terrifically hot weather. L. D. Taylor, Iowa's largest commercial beekeeper, was host. Mr. Taylor and his brother Lynn, with the help of a large crew of men, operate between 3000 and 4000 colonies spread out in some 40 or more yards. The Taylors have one of the most modern honey extracting plants to be found anywhere. For a more detailed description of their plant and management see pages 291-294, May 1941, Gleanings. Following a basket lunch in Harlan's beautiful park Glenn O. Jones of Atlantic, Iowa, vice-president of the Association and chairman of the program committee, called the meeting to order. The program was informal. Visitors from other states, Tom Burleson of Texas, who now operates some bees in Iowa, L. M. Gates, apiary inspector of Nebraska, and R. L. Parker, apiary inspector of Kansas, were called upon and responded with appropriate remarks. L. C. Dadant, of Hamilton, Ill., and R. F. Remer, of Souix City, Iowa, were asked to express opinions regarding honey price ceilings. The general consensus of opinion was that it would be a mistake to place the ceiling too high as that would tend to limit or curtail honey sales to consumers. In view of the sugar shortage, a reasonable price level should be maintained, at least a price that will give the producers a living margin of profit.

It devolved upon the writer, who by the way, traveled about 800 miles to appear on the program, to attempt to bring some words of wisdom on beekeeping. It would be inappropriate to comment on efforts put forth, other than to say that the audience was patient and forbearing. It was indeed a pleasure to meet so many Iowa beekeepers.—M.J.Deyell.

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The Superior Honey Co., Ogden, Utah, and The Sioux City Cooperative, Sioux City, Ia., have obtained licenses from the Cornell Research Council for packing the Dyce processed honey. Dr. E. J. Dyce has visited both organizations. While on the trip he called on many large packers, extending his trip to California, visiting several buyers and packers on the Coast, and returning by a roundabout way through Arizona, Texas, Colorado, Wyoming, South Dakota, Iowa and Ohio.

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Mr. Shelton Graydon, manager of Graydon Bros. Apiaries, Greenville, Ala., passed on recently. The business will continue.

SPEED THE PLANES WITH BEESWAX

Save the wax to pay your tax.
Save the scraps to beat the Japs.
An ounce of wax costs a pound of nectar.
A conscientious wax objector
Is patriotically blind and mulish,
Is honey wise and beeswax foolish.
Save the wax and never lax,
Cut the burr-comb from the racks.*

*Frames

American Honey Institute News Notes

A letter from the War Production Board in Washington asked that we cooperate in the Fat Salvage Campaign now going on. More than two billion pounds of fats are wasted in the kitchen each year. These fats are a source of explosives now vitally needed for the armed forces. There is also great need among our allies for fats and oils. Following are a few simple rules we have been asked to announce.

(a) The house wife should save "pan drippings". The grease should be strained and all meat scraps and foreign matter should be removed.

(b) The grease should be kept in a cool place—preferably an ice box or refrigerator—and the can should be covered in order to prevent objectionable odors.

(c) The fats should be placed in clean metal containers. Narrow necked containers and cans with jagged edges should be avoided. A vegetable shortening can is ideal. Under no circumstances should glass containers be used.

(d) The housewife should return the grease herself to her local meat market. There it will be weighed and she will be paid for it. It is urged that fats be returned during the first days of the week in order to relieve the butchers as much as possible during the weekend rush.

It is to be hoped that every honey producer will get solidly back of this campaign and support it to the utmost.

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On July 1st the postal rates on books were increased from 1½c to 3c per pound.

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Nature is doing a beautiful piece of work in sweetening beverages being used throughout the country this summer. With a shortage of tea and coffee, fruit juices sweetened with honey are the favorites.

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On June 25th the Director of the American Honey Institute broadcast over Station WEEI at Boston; on June 30th, over WHA-WLBL, Madison, on the use of honey in canning and preserving; and on July 13th, on news of the honey crop.

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The Sugar Rationing Board of the Office of Price Administration, Washington, D. C., requested copies of the Institute's leaflet entitled "Use Honey in Canning and Preserving" to post in their local boards for the information of the public.

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50,000 copies of the leaflet "Use Honey in Canning and Preserving" were distributed throughout the country in three weeks.

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An attractive illustrated sheet entitled "Ice Cream Without Sugar", by Doris Tisdale, appears in the July issue of Woman's Home Companion. Such titles as Fruit Swirl, Peanut Whirligig, and Chocolate Marble are given to the recipes which produce delectable ice creams.

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Rumford Chemical Works has produced an attractive leaflet of sugarless recipes. The cover design is a picture of the sugar can padlocked for the duration. A special Rumford honey cake is among the good recipes. The heading, in italics, reads "Any nutrition expert will tell you about honey's qualifications as a pure natural sweetening—and you'll find out that it helps a cake stay fresh longer!"

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National Nutrition Month, sponsored by the Super Markets of America, will be celebrated November 1 to 30, 1942. National Honey week, the last week in October, should give this month an excellent start. One of the suggestions given in the July issue of SUPER MARKET MERCHANDISING is to print this dessert on a placard, "Pears Baked in Honey". It suggests that canned or fresh pears or both and a jar of honey should be tied in for display. A recipe for Honey Baked Pears will be found on Page 26, "Old Favorite Honey Recipes".

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Are you acquainted with "Citrus Leaves"? The July issue of this magazine has a recipe for Pure Gold Orange Ice Cream. This recipe calls for 1 cup of honey.

Buy and Sell Here

CLASSIFIED ADS

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rates: 8 cents per counted word each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in the 10th of month preceding.

HONEY FOR SALE

NEW CROP comb and extracted honey. C. B. Howard, Geneva, N. Y.

FOR SALE—Extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

CHOICE MICHIGAN clover honey in new 60's. David Running, Filion, Mich.

NEW comb and extracted ready about the last of July. H. G. Quirin, Bellevue, Ohio.

CHOICE MICHIGAN white clover honey in 60's. L. S. Griggs & Son, 711 Avon St., Flint, Mich.

WILL HAVE more tupelo honey May 20th. Marks Tupelo Honey Co. Appalachicola, Florida.

PURE WHITE CLOVER honey· 5's and 60's. Ralph Hibbard, 131 Benedict Street, Watertown, N. Y.

NEW CLOVER COMB—Fancy, 14 to 16 oz., extra nice, $4.25 case of 24. Clarence Engle, Kearneysville, W. Va.

COMPLETE line comb and bottled honey, pure clover. Also packed in 5's and 60's. Central Ohio Apiaries, Inc., Millersport, O.

HONEY FOR SALE—We buy and sell all kinds, any quantity. H. & S. Honey & Wax Co., Inc., 265-267 Greenwich St., New York.

HONEY PACKERS—Write us for prices on carload lots of California and western honeys. We stock all varieties. Hamilton & Co., 1360 Produce St., Los Angeles, Calif.

OF COURSE you want the best. That is what you get when you buy TOWNSEND'S Michigan clover honey. Now ready for the market. E. D. Townsend & Sons, Northstar, Michigan.

NEW YORK State comb and extracted honey; buckwheat and clover; any quantity all size packages. Five-pound pails my specialty. Edward T. Cary, Midland Ave. and Tallman St., Syracuse, N. Y.

FOR SALE

BEST BEE HUNTING OUTFIT.—Grover, Bristol, Vermont.

QUEENBEE PAINTING outfits $1.00 postpaid. Southwick Apiaries, Waban, Mass.

FOR SALE—Two and four frame extractors, good condition. Koenitzer, Muscotah, Kansas.

TAKE OFF honey with BEEGONE—pint, express paid, $1.00. Honey House, Adrian, Michigan.

FOR SALE—Seventy eight-frame supers of extracting combs, clean, reasonable. Mrs. George H. King, Clifton Springs, N. Y.

FOR SALE—One two-frame reversible extractor, uncapping vat, 12 inch. Circular rip saw, jig saw. Wayland S. Case, Gordon, Nebraska.

WAX WORKED into quality medium brood foundation for 16c per pound; 100 pounds, $12. Fred Peterson, Alden, Iowa.

FOR SALE—Four-frame extractor. Ninety-gallon tank. Wax press, steam uncapping knife. All Root's products. A. F. Boynton, Route 3, Portsmouth, Virginia.

COMB FOUNDATION at money-saving prices. Plain, wired and thin sections. Wax worked at lowest rates. Comb and cappings rendered. Robinson's Wax Works, Mayville, N. Y.

WRITE FOR CATALOG. Quality bee supplies at factory store prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Bee Supplies, Onsted, Michigan.

THE ONLY complete line of wax rendering equipment ever offered—the "Perfection" Line. A size and type suitable for every commercial beekeeper. Write for descriptive circular. Robinson's Wax Works, Mayville, N. Y.

SAVE MONEY by letting us work your wax into wired or regular comb foundation. Large catalog describes everything. You pay only wholesale factory prices, as we have no agents. Walter Kelley Co., Paducah, Kentucky.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We will not guarantee any honey buyer's financial responsibility, and advise all beekeepers to sell for cash only, or on C. O. D. terms except where the buyer has thoroughly established his credit with the seller.

CASH PAID for carloads and less than carloads of extracted honey. Send sample and best price. C. W. Aeppler Company, Oconomowoc, Wisconsin.

WANTED—White and amber honey; any amounts. D. F. Treap, 317 Keenan Ave., Cuyahoga Falls, Ohio.

WANTED—White and light amber honey. Advise price your place not boxed. Roscoe F. Wixson, Dundee, N. Y.

WANTED—White clover honey in sixties. State price, quantity, in first letter.—C. Jankowski, Prairie View, Ills.

CASH FOR EXTRACTED clover and orange honey. Send sample and best price. Bizzy Bee Ranch, No. Abington, Mass.

WANTED—Honey and beeswax. Mail samples, state quantity and price. Bryant & Cookinham, Inc., Los Angeles, Calif.

WANTED—Comb, chunk comb, white and light amber extracted honey. Any amount. Central Ohio Apiaries, Millersport, Ohio.

CASH PAID for extracted white clover or light amber. Send samples and best price to Honeymoon Products Co., 39 E. Henry St., River Rouge, Michigan.

CASH
Paid
For Honey

Cans and Cases Furnished

Mail Samples and Best Price

C. W. Aeppler Company
Oconomowoc, Wisconsin

WANTED—White and amber extracted honey. Fancy comb, also No. 1 comb honey. Comb honey in shallow extracting frames. Beeswax. We render old comb into wax. Prompt remittance. Write us.
THE FRED W. MUTH CO. • CINCINNATI, O.

WANTED--Extracted Honey All Varieties
Send samples and delivered prices to
JEWETT & SHERMAN COMPANY
Cleveland, Kansas City and Brooklyn

We Ship No Bees or Queens After June 1st

for the remainder of the season. That we may have better post office service we are changing our address from Brooklyn, to Castleberry, Ala.

Caucasian Apiaries
Castleberry, Ala.
Home of genuine
Mountain Gray Caucasian Bees

WHEN WRITING TO ADVERTISERS, MENTION GLEANINGS

WANTED—White clover honey. Extracted, comb, and chunk comb, any amount. Lose Bros., 206 E. Jefferson, Louisville, Ky.

WANTED—Light clover honey. Send samples and delivery prices. Finger Lakes Honey Producers' Cooperative, Groton, N. Y.

CASH PAID for extracted clover honey. Send sample and best price. Clover Bloom Honey Co., General Delivery, Shrewsbury, Mass.

HIGHEST cash return made the day we receive your beeswax. Write for shipping tags and quotations. Walter Kelley Co., Paducah, Kentucky.

HONEY. WE PAY HIGHEST PRICES. Strained comb or beeswax. Write for quotations. Seifert & Mann. Since 1887. So. Water Market, Chicago.

WANTED—Extracted honey in ton lots or more. Send sample and quote price delivered here. C. J. Morrison, 1235 Lincoln Way West, South Bend, Ind.

WANTED—White clover and light amber honey. Any amount. Cash at time of delivery. Clover Blossom Honey Co., 712 Kossuth St., Columbus, Ohio.

HONEY WANTED—Truck or carload lots delivered to Sioux City, Iowa. Write us at Wendell and submit sample. R. D. BRADSHAW & SONS, Wendell, Idaho.

WANTED—All grades of comb and extracted honey. Bee supplies and honey containers for sale. Prairie View Honey Co., 12243 12th St., Detroit, Mich.

WANTED—We pay cash top price for clover honey in 60-lb. tins. Any quantity. Send samples and best price. Cloverdale Apiaries. F. M. Babcock, Fredonia, N. Y.

WANTED—Five tons shallow frame light chunk comb honey in supers, two carloads light white clover extracted cans, supers returned. Box 3, Gleanings, Medina, Ohio.

WANTED—10,000 pounds white sweet clover honey, also light amber mesquite, or mixed grades. State prices, delivered in 60's. Bee-Kist Products Co., P. O. Box 1158, San Antonio, Texas.

BEES AND QUEENS FOR SALE

YOUNG LAYING leather colored Italian queens, 50c each. Jasper Knight, Hayneville, Ala.

BRIGHT ITALIAN AMERICAN QUEENS, 50c each, any number. D. W. Howell, Shellman, Georgia.

NORTHERN-BRED queens; hardy honey getting Italians, 50 cents each. Shirl Baker, Rodney, Michigan.

CAUCASIAN "Queens", 60 cents each; 25 or more, 50 cents each. Lewis & Tillery Bee Co., Greenville, Ala.

REAL PETS—Brown's Stingless Bees—Queens, $1.00 each. Brown's Apiary, Cape May Court House, N. J.

IMPROVED ITALIAN queens 50c; from a strain that produced over 600 lbs. of honey per colony. Henry Loehr, Caldwell, Texas.

CHOICE bright Italian queens, northern bred for gentleness and hustlers, 75c each; dozen, $8.00. Emil W. Gutekunst, Colden, N. Y.

BETTER TRY Green's queens. They are the best, say many customers. Price 40c each, any number. D. P. Green, Rt. 2, Deland, Fla.

FOR SALE — Bright yellow and three-banded queens. Guaranteed satisfaction. Write for prices. Graydon Bros., Rt. 2, Greenville, Ala.

CAUCASIAN BREEDERS ONLY—Laying queens 75c; tested, $2.00; 2-lb. package and queen, $2.30; 3 lbs., $3.00. Miller Bros. Rt. 1, Three Rivers, Texas.

GOLDEN QUEENS — Excellent quality; gentle, productive; health certificate. Satisfaction guaranteed; 50c. O. E. Brown, Rt. 1, Asheboro, North Carolina.

FOR SALE — 100 colonies, equipment, crop. Reason, defense job. Certificate of inspection furnished at time of sale. Vernon Severance, Decker, Mich.

THREE-BANDED ITALIANS—Our Hustler strain gets the honey. Select untested queens, 60c each for balance of the season. Caney Valley Apiaries, Bay City, Texas.

GOLDEN Italian queens; good workers, and gentle to work with; untested, 50 cents each, and tested, $1.00. Satisfaction guaranteed. Carolina Bee Company, W. O. Curtis, Mgr., Graham, No. Car.

EXTRA YELLOW Italian queens that produce bees a little more yellow than three-banded; more gentle and just as good workers. Untested, 50c each; health certificate and satisfaction. Hazel V. Bonkemeyer, Rt. 2, Randleman, N. C.

FOR SALE — Northern - bred Italian queens; good honey getters; winter well, handle easily, not much inclined to swarm; safe arrival, return mail. One untested, 75c; 3 for $2.00. I. F. Miller, 183 Valley, Brookville, Pa.

NORTHERN-BRED leather-colored Italian queens, 50c each. We cooperate with good honey producers in the selection of our breeding queens and believe our stock to be as good as you can buy. Diemer Bee Co., Liberty, Mo.

FOR SALE—Bees and bee equipment, with or without honey. Extra queen excluders, inner covers, etc. Certificate of inspection will be furnished at time of sale. Kennedy Honey Co., 3301 Fowler Avenue, Omaha, Nebraska.

CAUCASIAN QUEENS—Large fine young well-bred gray queens that are a pleasure to work with; and, too, the bees are dependable for honey-gathering. Satisfaction guaranteed. No disease. Queens, only 40c each. Skinner Bee Co. Greenville, Alabama.

FOR SALE—Complete bee business in northern Ohio; about 500 colonies bees, inspected; about 2000 supers including crop of honey, including extracting and comb equipment, truck, extractors, all supplies. Reason, death of partner and defense work. Price immediate sale, $3500. Stevens Apiaries, Oberlin, Ohio.

THREE-BANDED Italian bees and queens of extra fine quality; also extra fine honey-gatherers, 2-lb. package with queen, $2.00 each; 3-lb. package with queen, $2.50 each. Untested queens, 50c each, any number. A health certificate with every shipment. Alamance Bee Company, Geo. E. Curtis, Mgr., Graham, No. Car.

HELP WANTED

HELP WANTED—Experienced man for large bee business. Ten months' work a year or more for satisfactory help. M. E. Ballard, Roxbury, N. Y.

MERRILL'S

Quality Bees and Queens

Prices on Packages with Queens

2-lb. pkgs. with queen	$1.75 each
3-lb. pkgs. with queen	2.25 each
4-lb. pkgs. with queen	2.75 each
Queens	.50 each

If queenless packages are desired, deduct price of queen. If larger packages or larger number is desired, write us.

• • •

Merrill Bee Co.

Bucatunna, Miss.

Mississippi's Oldest Shippers

Mack's Queens

(They Speak for Themselves)

Hardy Northern Bred Italians, guaranteed to equal any queens produced in America today. A breeder for over a quarter of a century. Until further notice price will be 60c each.

HERMAN McCONNELL

(The Bee and Honey Man)

Route 2 **Robinson, Illinois**

WHEN WRITING TO ADVERTISERS, MENTION GLEANINGS

TOO LATE TO CLASSIFY

NEW CROP extra quality white clover extracted honey. Sample 15c. A. J. Wilson, Hammond, N. Y.

WANTED—Experienced man in queen, package, and honey production. Year around work. Give full particulars when replying. Al Winn, Rt. 1, Petaluma, Calif.

SHAW'S

Three-Banded Italian Queens

For 19 years, this famous strain of Italians has pleased the most exacting honey producer and has made me friends wherever purchased. Try them and make this a profitable season. In addition to the above strain I will be able to supply you with queens from stock bred for resistance to disease.

Colonies averaged 200 lbs. here in Mississippi the past season. And this is no honey state. Prices either strain:

Lots of 1-24 ..... 60c
Lots of 25-99 ..... 55c
Lots of 100-499 ..... 50c

Tested queens, double the price of untested. All queens clipped free upon request.

A. E. SHAW, Shannon, Miss.

Mountain Gray Queens

June until November

No package bee orders accepted but we are operating three large queen yards and will appreciate it if you will send us your orders for queens ahead of shipping dates.

Good queens—good service!

Prices: 1 to 49, 60c each
50 to 99, 55c each

BOLLING BEE CO.
BOLLING, ALA.

WHEN WRITING TO ADVERTISERS, MENTION GLEANINGS

BEEKEEPERS ITEM

Serving the beekeeping industry for a quarter century without bias or prejudice. "The forum for the thoughtful." One year $1.00; two years, $1.50; sample copy, 3c stamp.
With Gleanings it provides a combination that covers the beekeeping field.
Both magazines for one year, $1.75.

BEEKEEPERS ITEM
P. O. Box 687 San Antonio, Tex.

WANTED TO BUY

WANTED—To buy second-hand large honey tanks, power extractors and honey pumps. Must be in good condition. M. C. Berry & Son, Montgomery Box 684, Ala.

MAGAZINES

THE INDIAN BEE JOURNAL—The only bee journal in India. Sample copy free. Yearly 7c6d. Apply Editor, Indian Bee Journal. Jeolikote, Dist. Nainital. U. P. India.

A BEE JOURNAL edited and published for Western Beekeepers. One dollar per year. Clubbed with Gleanings for $1.75 per year. Western Honey Bee, 3905 Lemon St., Riverside, California.

READ the South African Bee Journal to be conversant with conditions from far afield. Subscription 5/ per year. For further particulars, write to the Hon. Treasurer, P. O. Box 43, Cleveland, Johannesburg, S. Africa.

WESTERN CANADA BEEKEEPER, official organ of the Manitoba Beekeepers' Association, one year, $1.00; in combination with one year's subscription to Gleanings in Bee Culture, $1.60. Wallingford Building, Winnipeg, Canada.

MANY BEEKEEPERS have proven raising fox, mink, nutria, muskrats, rabbits, highly profitable. Send dime for sample copy. Canada's oldest fur farming magazine telling how. Fur Trade Journal of Canada, Box 31, Toronto, 2, Ontario.

THE BEE WORLD—The leading journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy post free. 12 cents stamps. Membership in the Club, including subscription to the paper 10/6. The Apis Club, L. Illingsworth, The Way's End, Foxton, Royston, Herts, England.

WHEN WRITING TO ADVERTISERS, MENTION GLEANINGS

CAUCASIANS

Extra gentle, prolific, long tongue, little inclined to swarm, dependable workers,—10% to 40% ahead of Italians. Foundation stock from mountainous region of Terek, Caucasus.

CARNIOLANS

Prolific at all times, very gentle, best of workers. One record of 435 lbs. average over whole yard. Build beautifully white combs. My strain used in the recent Iowa Exp. Sta. test showing Carniolans best for western and northern conditions. Have supplied many Agricultural Colleges and Experimental Stations with them. Free Paper. Both races bred here in the North, hardier and thriftier. August is a good time to requeen.

Prices: Untested queens 1 to 5, 60c each 6 or more, 50c each. Tested $1.00 each. By Air Mail, 5c extra per queen.

ALBERT G. HANN
Glen Gardner, New Jersey

YORK'S PACKAGE BEES and QUEENS

QUALITY BRED ITALIANS

A Great Season, Largest Demand Ever. Thanks to All!

With all fairness we wish to state we sold no bees or queens for less than our regular list price and all were supplied from our own apiaries only. We strived to give you the very best quality possible and comments are bearing this out. Will continue to supply bees and queens for remainder of season. Rush your order for prompt service. Prices as follows:

Young laying queens	**$ .75 each**
2-lb pkgs. bees with queens	**2.50 each**
3-lb. pkgs. bees with queens	**3.20 each**

Queens by airmail, add 5c per queen. Queens clipped, 10c each extra.

YORK BEE CO., :: Jesup, Georgia, U. S. A.

The Universal Apiaries

FINE ITALIAN QUEENS BY RETURN MAIL 50 cents

2-lb. Package with Queen, $1.75; 3-lb. Pkg. with Queen, $2.75

Pkgs. F. O. B. express, if by parcel-post add postage.

Gentle
Hardy
Prolific

No "ifs" nor "ands". Now is the time to requeen with the best Italian queens of proven quality. Our 20 years of experience assures you of the best stock money can buy. Safe arrival, quick service, full weight, health certificate, young queens absolutely guaranteed in every respect.

Fine
Honey
Gatherers

NORMAN BROTHERS APIARIES, RAMER, ALABAMA

MAJOR HONEY FLOWS RELATED TO LENGTH OF DAY

(Continued from page 471)

Down in Texas the first and second major honey crops are given as cotton and horsemint. Both of these plants are in full bloom, during the longest days of the year.

If the major honey crop of every state in the Union were examined it would be found that crop would be in full bloom within ten days of the 21st of June. Fruit bloom occurs in a great many states, but does not become a major honey crop because the colonies are too weak, the weather is uncertain at this time of year and the days are too short.

Plenty of long, sunny days are requisite for the bees to store a full crop of honey. These days, year in and year out, are found in the beginning of summer at about the longest day in the year. It would be interesting to know whether in Australia and South America the major honey plants bloom about the 15th to the 22d of December.

Miami, Florida.

Announcing

the purchase of the Alabama Apiaries of David Running. We have now arranged to supply a limited number of queens from this stock from our Georgia headquarters.

If interested in securing these queens, write at once so that we can arrange to supply you.

Queens, small lots, 60c each

Either Running stock or imported strain. Quantity prices on request.

Rossman & Long

Box 133 **Moultrie, Ga.**

DR. DYCE SUCCEEDS GEO. REA

(Continued from page 489)

Dr. Dyce was born in Ontario, graduated from Ontario Agricultural College with the degree of B.S.A. in 1923. He took this work under the late Prof. F. E. Millen, formerly of Iowa. He secured the degree of M. Sc. in Entomology at McGill University in 1928 and his degree of Ph.D. in 1931 as a student under Dr. Phillips at Cornell University. Dr. Dyce also kept from three to five hundred colonies of bees as a sideline from 1923 to 1940. He was Provincial Apiarist and Professor of Apiculture in Ontario from 1933 to 1940.

Dr. Dyce is eminently well qualified for his new job and we wish him a full measure of success.

HOMAN'S

3-Banded Italian Queens

Tested Queens, each $1.50
Mated Queens, each $0.50
HOMAN BROS, Shannon, Miss.

SPINSTER JANE SAYS

(Continued from page 492)

my neighbor they are tasteless. In some things honey and its flavor blends beautifully. In other things it isn't good at all. When by constantly using it, we find where it does fit and belong, we should broadcast that knowledge. So far in my experimenting, I've found only two places I really like it. One is in cookies, the other in pumpkin pie. Soon I will try it in pickles, the first to be rhubarb pickle. I originated a rhubarb pickle of my own some time ago, one scarcely to be told from green tomato pickle. It comes in fine when the first rhubarb comes in the spring, when pickles are getting low on our supply shelves, and when I try it out with honey, if successful, will give you the recipe. It helped me out of a bad mistake, one time, but I'll tell how, when I try it with honey. Right now it is mail time.—Spinster Jane.

WHEN WRITING TO ADVERTISERS, MENTION GLEANINGS

"YES" Queens Via Return Mail
No Delays

I ship when you want them. Price List

Select Untested Queens ..... 60 cents each
24-99 Queens .....55 cents each
100 or more Queens, 50c each. Select Tested Queens, $1.20 each

All Queens guaranteed purely mated and to give service.

W. E. HARRELL Hayneville, Alabama

2 Years $1.50

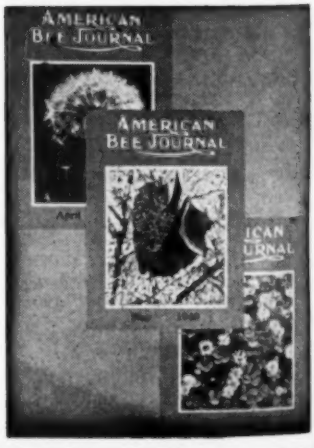
American Bee Journal—monthly: published and edited by beekeepers for beekeepers. Full of pictures and tips on care of bees and selling of honey.

—SAMPLE COPY FREE.

$1.00 a year, 2 years $1.50 in U. S. and Canada. Combined with Gleanings in Bee Culture, both magazines, **ONE YEAR, $1.60.** This offer good only in the United States.

Address—

American Bee Journal, Hamilton, Ill.



NEW FOUND VALUES OF HONEY

Now being Proved by Scientific Research!

A REPORT TO ALL HONEY PRODUCERS
HONEY RESEARCH AND MARKETING IMPROVEMENT 1929-1942

Accept free Reprint

"Vitamin Content of Honeys"

from Journal of Nutrition

A remarkable change is taking place in the attitude of the medical profession and the public toward honey.

Values hitherto unsuspected are now attributed to honey; values associated in a legendary way with this food of the Promised Land are now being substantiated by research.

Much of the current enlightenment on honey is due to certain scientific studies sponsored by the producers of Lake Shore Honey—America's largest selling brand.

Starting in a small way in 1929, W. F. Straub and Company later attracted national attention by introducing to the grocery field a honey packed in a remarkable new glass container—the honeycomb jar—the jar designed like a honeycomb—"the jar that says honey in any language."

Lake Shore Honey was then advertised nationally to the public, creating among housewives a demand for branded honey of uniform flavor blended from honeys whose flavor sources were known.

This public education on honey flavor, plus the advertising of Lake Shore Honey with recipes tending to increase consumption, has helped to lift the average per capita use of honey above its former level.

During these years Lake Shore Honey has been sold at a maintained price based upon cost of packing plus a reasonable profit. This has helped stabilize an industry where producers selling below cost have frequently caused price confusion and loss of profit.

In recent years Lake Shore Honey has sponsored various University Fellowships in honey research, including studies on vitamin content—experiments in vitamin fortification of honey, studies on infant feeding, etc.

The latest of these studies, a reprint from the June 1942 issue of the Journal of Nutrition, tells of new findings on the Vitamin B Complex content of honeys.

This reprint gives the latest research on this subject and is something that should be in your hands.

A copy will be sent you free and without obligation. Send for it today.

Now is the time to acquaint millions of consumers with the values of honey and to expand honey consumption normally—by having it used in the home. Your honey marketed through W. F. Straub and Company goes into the home and into normal use. It helps expand advertising of honey which increases public demand for honey; hence, brings you advantages beyond the price alone—advantages not associated with the sale of your honey for bulk use. Send for the free reprint and the Straub proposition today.

Lake Shore
PURE HONEY
ASK FOR THE HONEYCOMB JAR

LAKE SHORE HONEY, 5520 Northwest Highway, Chicago, Ill.

Send me free copy of booklet, "Vitamin Content of Honeys." Check here for information on the Lake Shore Honey contract which pays you full price for your honey and assures increasing and steady market.

I operate .... colonies of bees.

I expect to produce .... lbs. of honey this year. My asking price for honey is now approximately ....c per lb. (This is not binding, merely for survey of prices current in different parts of the country).

Name .....

Address .....

City ..... State .....

Facts We Should KNOW

(1) THE AMERICAN HONEY INSTITUTE is a business primarily to develop more consumer interest in honey.

(2) During the first four months of 1942 the INSTITUTE furnished honey information to over 1000 organizations in 48 states, four provinces of Canada, also England and Cuba (not to mention thousands of individuals).

(3) The following are just a few who asked for and received information:

Newspapers
Magazines
Broadcasting Stations
Universities & Colleges
Home Demonstration Agts.
Red Cross
Nutrition & Canteen Work
Candy Companies
Agr'l Marketing Service
Bakers
Canners
Dairies
Meat Packers
Wholesale Grocers
High Schools
School Lunch Kitchens
Pullman Co.
Civilian Defense Council
Home Maker Clubs
Farm Bureaus
Y. W. C. A.
Cafeterias
Hospitals
Brewing Companies

(Help yourself by helping the **Institute)**

• • •

Mail Contributions to

American Honey Institute
Madison, Wisconsin

WITH BEES IN KENTUCKY

(Continued from page 459)

seven tons of coal paid for with honey—quite a satisfaction when we looked ahead to winter days.

And still the bees made honey. The supply of foundation was running low. Our parents put together new super frames previously ordered knocked-down. Puzzled, they commented upon the amount of honey we were taking. These were their bees and not in a lifetime of beekeeping had they found them so rich in stores. Were we having beginner's luck? Later we saw the explanation in a current journal: We were experiencing the greatest honey flow in fifty years!

We learned the steady contented hum the bees make during a honey flow, and, strange though it was for our region, there seemed to be one honey flow overlapping another all summer long. We learned to recognize the movements of the bees when they were finding abundant nectar—a swift springing movement taking them direct from the hive high into the air. Under the guidance of our mother we gained experience putting foundation into the two styles of super frames, and comparing the advantages of each—putting the foundation in with hot wax when we had a convenient fire; the style with the little bar and nails when no fire was handy. We saw the swiftness of the honey season rush upon us and swirl us along through May, through June, week to week, month to month, and we were made aware of the necessity next season of having all things in readiness, as nearly as can be made so, before the honey flow rush is on. What a normal season is like, we know not. We do know the coming season could be another nectar summer and, like the Wise Virgins, we want to be ready.

Yosemite, Kentucky.

WHEN WRITING TO ADVERTISERS, MENTION GLEANINGS

Moore's Strain

Away back in 1879 I commenced rearing Italian queens with the object of improvement constantly in view.

By careful selection during all these years I have succeeded in producing a strain of three-banded, leather-colored Italian bees, known as MOORE'S STRAIN OF ITALIANS, which has won a world-wide reputation for honey-gathering, hardiness, gentleness, etc.

Send for descriptive circular and read reports from those who have tried them.

Untested queens, 50 cents each.

J. P. MOORE, R. 3

Falmouth, Ky.

Former address, Morgan, Ky.

Safe arrival and satisfaction guaranteed.

Summer Prices

3-banded Italian

QUEENS

Any quantity 50c net

The PUETT COMPANY

HAHIRA, GA.

WHEN WRITING TO ADVERTISERS, MENTION GLEANINGS

Australian Beekeeping News
The Leading Bee Journal of the Southern Hemisphere is the

"Australasian Beekeeper"

Subscription 5 shillings per year. Start any time. Inquire for International Money Order for 5 shillings (Australian) at your Post Office.
Write now to The Editor, P. O. Box 20. West Maitland New South Wales Australia

Progeny-Test QUEENS Stock Bred for Resistance

Good stock with a scientific breeding background is what we offer. Get your colonies requeened for better results during 1942.

Prices: 1-25 ....60c 20-100....55c 100 or more 50c

BESSONET BEE CO., Donaldsonville, La. Add 10c per queen for stock bred for resistance.

$100.00 FIRST PRIZE

$50.00 Second Prize; $25.00 Third Prize

For the Most Practical Method of Producing Beeswax from Commercial Hives

BEESWAX PRODUCTION

During the Season of 1942

You have an opportunity to win one of these fine prizes. We have urged in every issue of Gleanings in Bee Culture the production of beeswax to meet the extra demands. The April number contained an article entitled, "Saving and Producing Beeswax."

HERE ARE THE SIMPLE RULES:

1. Write a story of 250 to 300 words of your method of producing beeswax in Standard hives.
2. Tell how you handled your colonies, giving the number of colonies operated.
3. Include a sworn statement of the number of pounds of beeswax produced from Jan. 1 to Nov. 1, 1942, per colony.
4. All entries must be postmarked not later than Dec. 1, 1942, and are the property of The A. I. Root Company. The decision of our judges is final.

WE WILL BUY YOUR BEESWAX

We are in the market for beeswax and will pay the highest prevailing prices. Our market price for domestic beeswax is

BROOD WAX—40 cents—Cash price per pound, delivered to Medina.
42 cents—Trade price per pound, delivered to Medina.
For Capping Wax We Pay One Cent per Pound Extra.

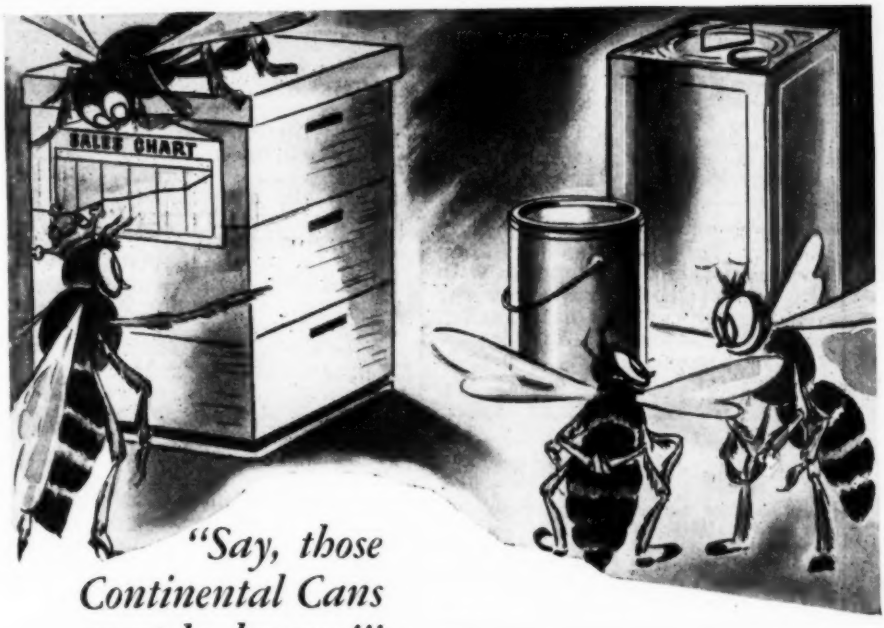
Beeswax prices come under the Government General Price Ceiling and may not be any higher than in March, 1942.

SHIP TODAY

Shipments of 50 pounds or less from places in 1, 2 and 3 Zones, can be sent by parcel post.

The A. I. Root Company, Medina, Ohio

Your beeswax can be stored by us and completely covered by our insurance policy against loss by fire. We will buy it when you are ready to sell.



"Say, those Continental Cans must be honeys!"

EVEN the bees go for Continental's line of honey cans and pails!

Bright, tight, and clean, Continental cans and pails do a lot to help sell your honey. What's more, they're your assurance of complete protection.

Continental distributors always carry a complete stock of honey cans and pails ready for immediate shipment. They're conveniently located, so write, wire or phone the nearest for information on prices, sizes, terms, or samples. They're always glad to serve you promptly.

Complete information is also "yours for the asking" at any of our offices.

CALL THE NEAREST CONTINENTAL DISTRIBUTOR

PHOENIX, ARIZ.
Quick Seed & Feed Co.
Western Seed, Feed & Honey Co.

TUCSON, ARIZ.
W. C. Collier

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B-Z-B Honey Co.

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California Honey Co.
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E. F. Lane & Son

SPRING VALLEY, CALIF.
Darwin L. Baker

VALLEY CENTER, CALIF.
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DENVER, COLO.
Martin Brothers Company
Attn: R. J. Chadbourne

MONTROSE, COLO.
Western Colorado Honey Exch.

BOISE, IDAHO
Reilly, Atkinson & Co., Inc.

GREELEY, IDAHO
L. R. Rice

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DECATUR, IND.
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ONSTED, MICH.
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FOREST LAKE, MINN.
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Northwestern Supply Co.

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Leahy Mfg. Co.

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G. B. Lewis Co.

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SALT LAKE CITY, UTAH
Miller Honey Co.

LYNCHBURG, VA.
G. B. Lewis Co.

NORFOLK, VA.
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WATERTOWN, WISC.
G. B. Lewis Co.

POWELL, WYO.
A. D. Hardy

CONTINENTAL CAN COMPANY
4622 WEST NORTH AVENUE, CHICAGO, ILL.
WHEELING · JERSEY CITY · LOS ANGELES · ST. LOUIS · CINCINNATI

PETTIT'S SUMMER QUEENS
will please you.
They please many others.
50c each, U. S. money, any number
Morley Pettit, Tifton, Georgia
In Canada, send 60c each to cover U. S. Exchange and Duty to
Morley Pettit, Georgetown, Ont.

Bright Three - banded Italian Queens. Begin now. Requeen with our improved stock, and you can divide your colonies next spring, and save on package buying.
1 to 50, 60c each; 50 up, 50c each.
Taylor Apiaries Luverne, Ala.

St. Romain's "Honey Girl" Italians
Hardy—good honey producers—gentle
2 Lbs. Bees With Young Queen . . . $2.50
Untested (young) Queen, 1 to 3, 75c ea.
4 to 9, 65c ea; 10 or more, 60c ea.
A. D. ST. ROMAINS APIARIES
Moreauville, La.

Get READY for 1943
Italians - Caucasians
Queens as good as money can buy 60c each.
Weaver Apiaries
Navasota, Texas

ITALIAN QUEENS
Northern bred by HOLLOPETER, the finest we know how to produce. Now at their best. Untested, 75c each; 10, $7.00; 25 and up, 60c each; young tested, $1.50; breeders, $5.00. Safe arrival of disease free stock by return mail. Guaranteed.
WHITE PINE BEE FARMS
LOCK BOX 80 ROCKTON, PENN.

CANADIAN QUEENS
Choice Italian Queens, fresh from our own yards here at Troy, Ont.
Untested, 75c each; Tested, $1.
Also Bees and Bee Supplies
LORNE SHELLY, Troy, Ont., Can.

CANNING THE VICTORY GARDEN SURPLUS

(Continued from page 468)

Boil corn and cut from cobs. Grind corn, celery, peppers, and onions. Mix with the other ingredients and boil until the mixture has thickened, about 20 or 30 minutes. Bottle and seal while hot.

Honey Pepper Relish

Twelve red peppers, 12 green peppers, 15 onions chopped fine, vinegar, 1 pint vinegar, 2½ cups honey, 3 tablespoon salt, and 3 tablespoons mustard seed.

Remove seeds from the peppers and chop or grind; mix with the onions and pour boiling water over the mixture. Let stand 5 minutes, then drain. Make a weak solution of vinegar, taking one part vinegar and two parts water. Put pepper mixture in the vinegar, let come to a boil; let stand ten minutes, then drain again. Add 1 pint vinegar, the salt, and honey and let come to a boil. Boil 2 minutes, then bottle and seal.

Honey Chili Sauce

Fifty medium ripe tomatoes, 10 medium onions, 4 red peppers, seeds removed, 1 large bunch of celery, 1 quart of vinegar, 1 tablespoon whole allspice, 1 teaspoon ground mustard, 1 tablespoon whole cloves and broken cinnamon stick, 2½ cups honey, 2 tablespoons salt,and 1 nutmeg grated.

Scald, peel, and chop tomatoes, and put in a colander to drain. Chop the other vegetables. Mix and boil 2½ hours. Tie whole spices in a bag, boil 15 minutes longer. Bottle while hot and seal.

Many of us will find that the budget will not permit buying those tiny cans of sweet peppers and pimientos that we like to have on hand for a bright garnishing touch, or to add a fillip to casserole dishes and salads. Can your own! Easy, simple, and costs next to nothing! Cut bright rings or strips and alternate them with strips of crisp bacon to garnish an uninspiring looking but good-for-you lima bean casserole.

Wash and cut sweet green or red peppers in 2 or 3 pieces crosswise. Remove seeds and soak over night in brine made by dissolving 1 cup salt (not iodized) in 2 quarts water. In the morning drain and pack in hot sterilized jars. Fill with scalding hot liquid made by adding ⅓ cup honey to each quart of vinegar. Bring to boil and skim. Seal at once. When cool store in a dark place.

Aurora, Nebraska.

A. F. B. QUEENS
of Resistant Stock Only

We are glad to have this strain to offer. It is U. S. Government Stock pure Italians, leather colored. We are certain this is the most prolific stock we have ever seen.

Both Queen and Drone mothers are tested before they are used in our breeding yards.

Queens ..... 60c; Lots of 100 or more 50c

R. L. BERNELL Rt. 4 Box 270 **New Orleans, La.**

Send your cappings and old comb to MUTH for rendering into beeswax. . . .
THE FRED. W. MUTH CO. Pearl and Walnut Cincinnati, Ohio

Queens of Quality
40c each - any number

By Return Mail

Bright 3-band Italian bees and queens of highest quality. Purely mated. Safe arrival and satisfaction guaranteed. Packages express collect. Health certificate furnished.

NO STAMPS ACCEPTED

Untested Queens	.40c
Tested Queens	.80c
2-Lb. Pkg. With Queen	$1.60
3-Lb Pkg. With Queen	$2.40

JOHN A. NORMAN
Route 2 Ramer, Ala.

Select Northern - bred Italian Queens, prepaid, 70c each. Special price on 50 or more. Backed by 30 years experience. Satisfaction guaranteed.

West Branch Apiaries
Grover Hill, Ohio

Better-bred Queens **Three-banded Italians**

50 cents each

Head all your colonies with our Better-Bred Stock. They have proven their good qualities throughout the U. S. and Canada. Use them for increase, requeening and swarm control.

CALVERT APIARIES, Calvert, Ala.

MUTH'S WAX RENDERING DEPARTMENT IS ALWAYS BUSY

Our steam wax presses do perfect work rendering all the wax from the comb and cappings . . . Thousands of beekeepers from all over the nation send their combs to MUTH for rendering . . .

THE FRED. W. MUTH CO.
Pearl and Walnut Cincinnati, Ohio

Root QUALITY
BEE SUPPLIES

NORFOLK BRANCH CLOSED

Mail Your Order for Bee Supplies, Honey Containers, Labels, etc., to
12 West 21st Street
New York
or to

The A. I. Root Company
MEDINA, OHIO

BEE STINGS

Pheno - Isolin instantly stops the pain. A most wonderful discovery for bee stings. Write for information and price.

THE FORCE CO., Scranton, Pa.

WHEN WRITING TO ADVERTISERS, MENTION GLEANINGS

QUEENS QUEENS

CAUCASIAN ITALIAN

FOR INCREASE
FOR REQUEENING
FOR BETTER BEEKEEPING
FOR QUEENLESS COLONIES
FOR ALL OTHER REQUIREMENTS
FOR BEST RESULTS GET STOVER'S

Prices

1 to 24.....$ .60 each
25 to 99..... .55 each
100 to 499..... .50 each

Postpaid by Regular or Air Mail

Clipped at No Extra Cost

THE STOVER APIARIES
MAYHEW, MISS.

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